Issue 228
PS
1971 Series
November
THE PREVENTIVE MAINTENANCE MONTHLY
WOT'S THE MASK FOR, CONNIE...? KOFF! ARE WE GOING SCUBA DIVING? CHOKE!
NO WAY! THIS AIR POLLUTION IS TOO MUCH! KILL THOSE IDLING ENGINES.
Chuck Kraver
The Army is joining you—in the battle against air pollution.
It's everybody's fight.
Commanders . . .
maintenance officers . . .
mechanics . . .
equipment operators.
The enemy? Anything that poisons our air.
See next page . . .

Fighting Air Pollution - EVERYBODY'S Thing

The big "guns" are zeroing in on the sneakiest, most common air fouler—engine exhaust. Carbon monoxide ... unburned hydrocarbons ... oxides of nitrogen.

You can't stop it all. There's no perfect engine and no perfect fuel.

But everyone can lend a hand in holding air pollution down. You've already got part of the word—TB 9-2300-402-10 (Feb 71), Air Pollution Control Procedures For Tactical And Combat Vehicles. The TB's a guide on keeping your engine in top running shape so fuel burns better. Partly burned fuel is the worst air polluter.

This's a good attack on air pollution—but not good enough.

Every soldier knows that the best way to cripple an enemy is to cut his supply line. Hit him where he starts!

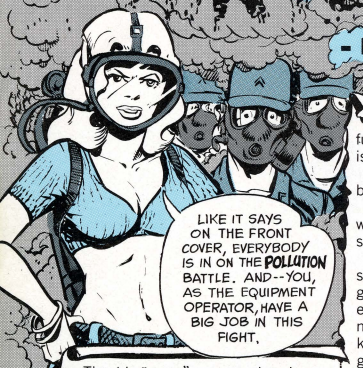
Air pollution starts as soon as you start your engine. Usually, a big engine takes more fuel than a small engine, so the big engine pours out more exhaust gas. And this poison keeps pouring out as long as the engine is running.

The answer? Simple. Smaller engine and shorter running time.

Then why dispatch a 2½-ton truck to pick up a few supplies when a 5-quarter will do the job? Or maybe a ¼-tonner will do—even if you have to hook on a ¼-ton trailer.

It's just a matter of fitting the equipment to the mission.

Fighting AIR POLLUTION - EVERYBODY'S Thing



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And how about your truck sittin' there idling away for a half-hour or so while you wait your turn at the pickup point? The fuel waste is bad enough, but your engine is poisoning the air for no good reason. So shut down—unless the TM for your vehicle says you're s'posed to keep 'er running during brief halts.

With your hands 'n' feet on the controls and with your eyes, ears and nose tuned in all the time, you're right on top of it. You're the first to know when your truck's not acting right. Everybody depends on you to report trouble.

And the driver—if he's a good one—can help fight air pollution just by the way he drives. Jackrabbit starts and other kid stuff dump partly burned fuel out the exhaust.

Playing around with the gas pedal is just as bad. When you're cruisin' down the road, keep steady foot pressure on the pedal. When you're stopped for a traffic light—or at a rail crossing—keep your foot off the pedal. Let 'er idle at the idle speed she's set for. None of that kid stuff . . . going varoom—varoom!

Drive "by the book"—your -10 operator's TM.

PS

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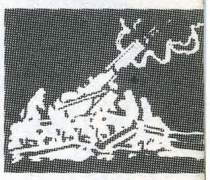

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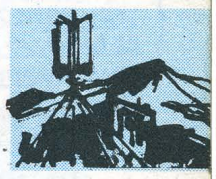

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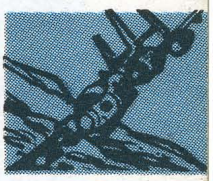

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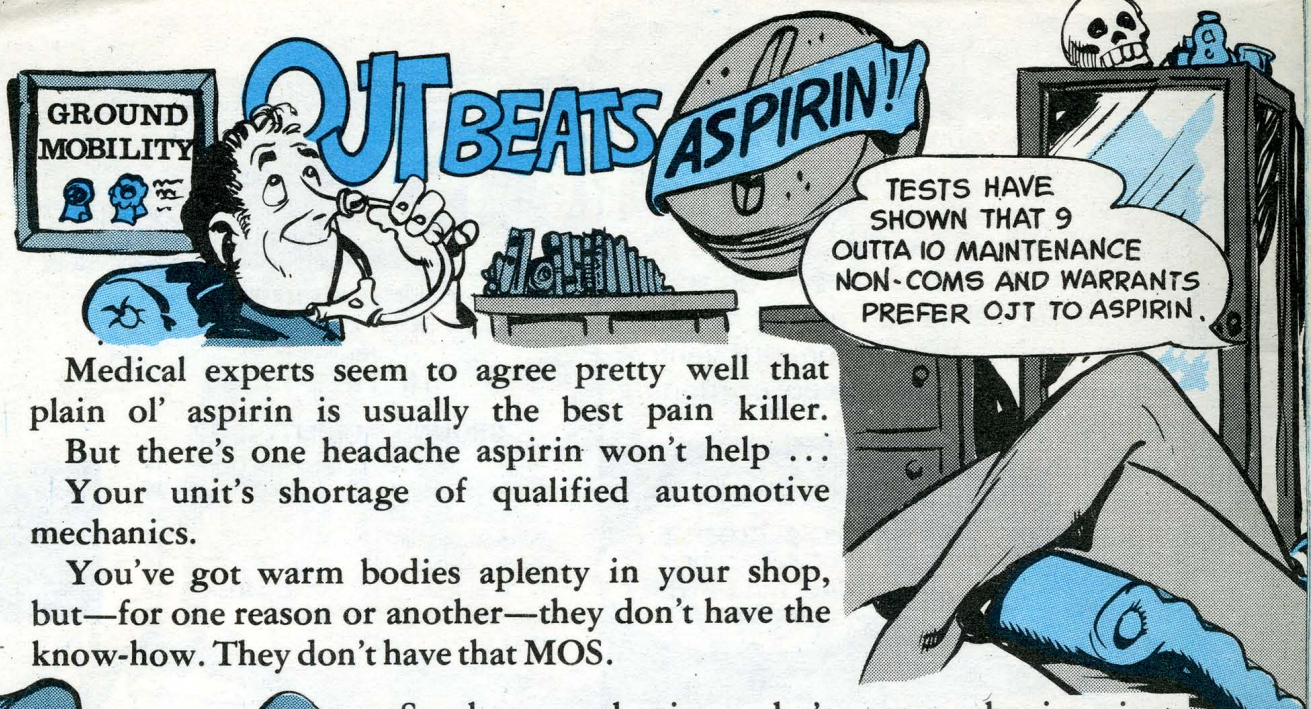


Medical experts seem to agree pretty well that plain ol' aspirin is usually the best pain killer.

But there's one headache aspirin won't help ... Your unit's shortage of qualified automotive mechanics.

You've got warm bodies aplenty in your shop, but—for one reason or another—they don't have the know-how. They don't have that MOS.

So these mechanics—who're not-mechanics—just stand around—bored. Or you hand 'em simple little jobs that won't get them—or the equipment—into trouble. ... and your MOS-qualified mechanics carry the load, trying to keep up with repairs and periodic services ....

... and your CO has a wallopin' headache ...!

So what ever happened to OJT—On Job Training?

GET WITH A PROGRAM—True, a handful of top-notch mechanics does not make an OJT program. Good instruction calls for a system—a framework—guidelines. That's what makes a "program".

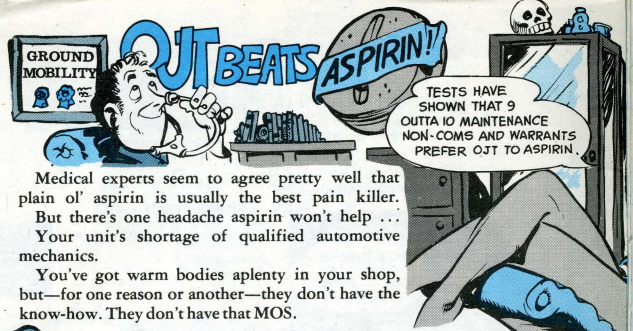
All the pieces are available—free for the asking—to set up a unit automotive mechanic OJT program. And a good one!

With all the pubs and other training material offered, this OJT can be designed to meet your unit's exact needs ....

—Starting from scratch, making mechanics out of guys who don't know the difference between a box wrench and an open-end wrench

—Switching helicopter mechanics over to automotive mechanics

—Refreshing automotive mechanics who've got rusty while on some other duty.



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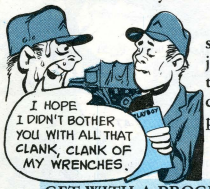

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(Another good one is ASubjScd 29-3 (Jun 65), Organizational Automotive Maintenance (Unit Motor Maintenance Personnel).

Since these are the patterns for the full-scale formal school training programs, they may be a bit too heavy for unit OJT, but you can scale 'em down to fit. And they list a lot of pubs and training aids that you can use in OJT.

Designed especially for OJT, though, and a good starting point is DA Pam 350-26-1 (Nov 70), Organizational Mechanic Repairman Course, Tactical And Support Vehicles, Truck Utility, 1/4-Ton, 4x4, M151. It's listed in DA Pam 310-1. There's also a -2 and a -3 (both Nov 65) in this series, covering the M51 5-ton dump truck and the M543 5-ton wrecker.

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There're TF's (training films) showing how to use all sorts of tools—wrenches, pliers and screwdrivers, chisels, hammers—and that ol' low-voltage-circuit tester.

And there're TF's on "Sealed Electrical Systems," "Engine Tuneup," "The Fuel System," "Springs And Shock Absorbers."

There's even a recruiting film (RF) that "may be used for orientation and esprit de corps"—RF 9-1, Career Reports—Motor Mechanic. This film shows the career opportunities for automotive mechanics.

With this brightening the would-be mechanic's eye-on-the-future, he may be interested in helping himself by signing up for this course listed in DA Pam 350-60 w/Ch 1 thru 15 Announcement of Army Correspondence Courses:

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Demounting a tire the wrong way will cost you—sweat, strain and time. It may even cost you dough ... if you damage the tire, tube or rim with a sharp object, or some other unauthorized tool.

Teamed-up with your tire demounter (FSN 4910-683-9362) from your organizational maintenance shop set, you can safely demount a tire in nothing flat.

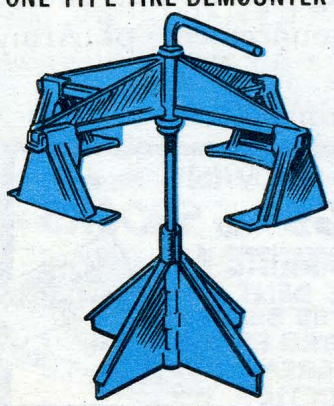
Your demounter handles tires ranging in size from 7.00-16 thru 14.00-24.

That covers military-type tires used on equipment ranging from ¼-ton trucks through some 5-ton vehicles and regular tires on standard commercial vehicles. Tire sizes are called out in your vehicle's -10 or -20 TM, or in the manufacturer's manual.

Learn to use the demounter right and it'll do the heavy straining for you.

Demounters may differ a bit in design, but they all work the same—and normally they all have 7 main components:

ONE TYPE TIRE DEMOUNTER



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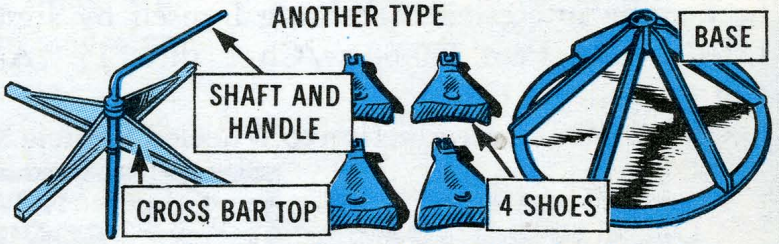

A base with a tapered top (it may be star-shaped or cone-shaped).

A cross-bar top (some tire men call it the spider).

A screw shaft which joins the top and the base, and also forms the handle. Four shoes.

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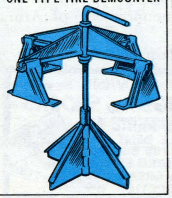

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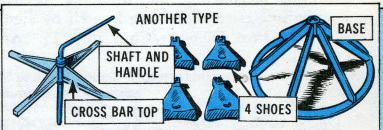

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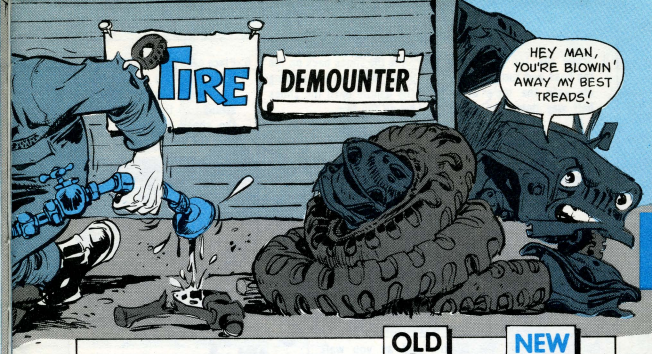
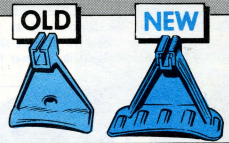
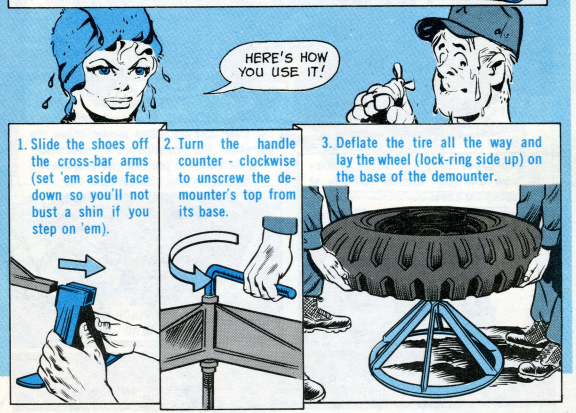


On later model demounters the shoes are longer, have a greater arch, and a more tapered gripping edge.

Your shop'll normally keep the demounter assembled.



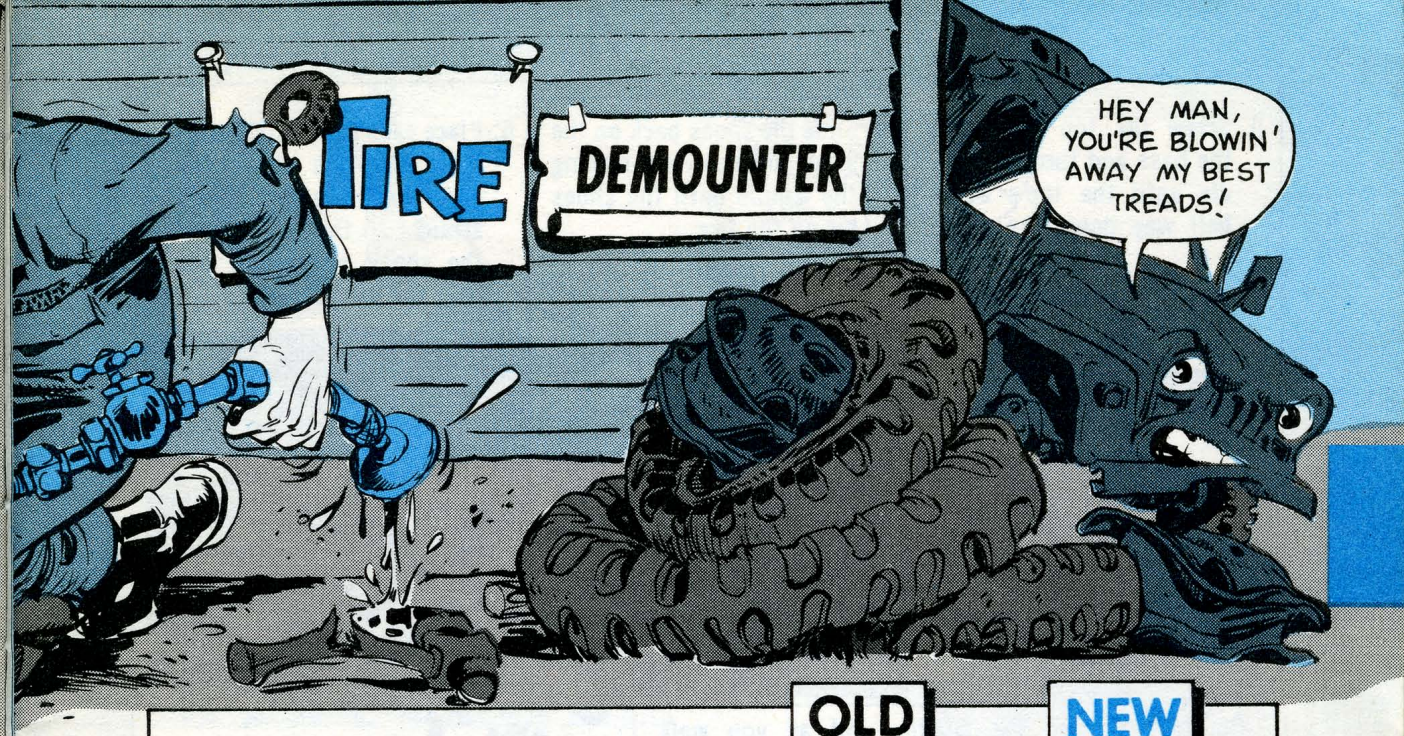


1. Slide the shoes off the cross-bar arms (set 'em aside face down so you'll not bust a shin if you step on 'em).

2. Turn the handle counter - clockwise to unscrew the demounter's top from its base.

3. Deflate the tire all the way and lay the wheel (lock-ring side up) on the base of the demounter.

PS MORE



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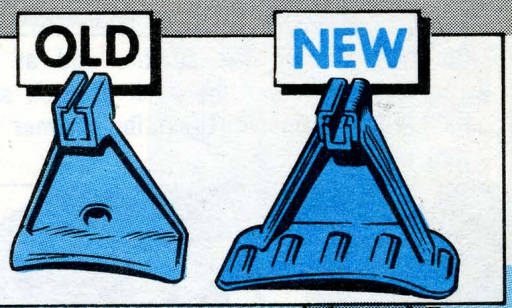

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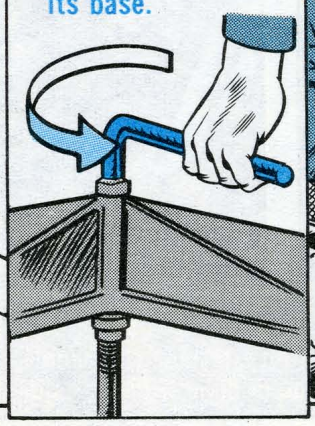
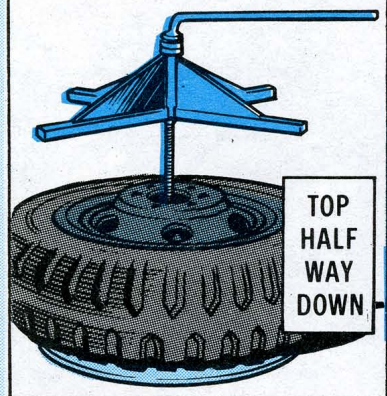


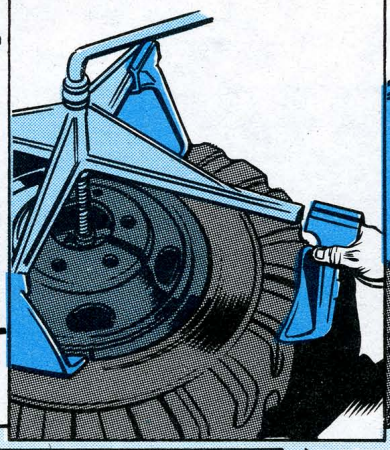
3. Deflate the tire all the way and lay the wheel (lock-ring side up) on the base of the demounter.

P.S MORE

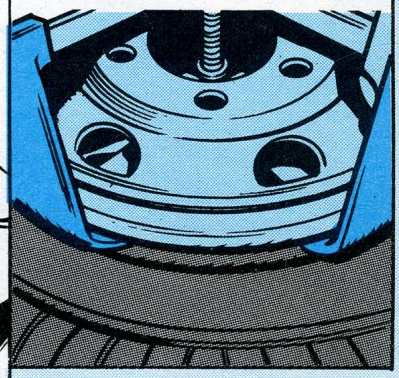
4. Screw the top back into the base and turn the handle until the top's about half way down the shaft.



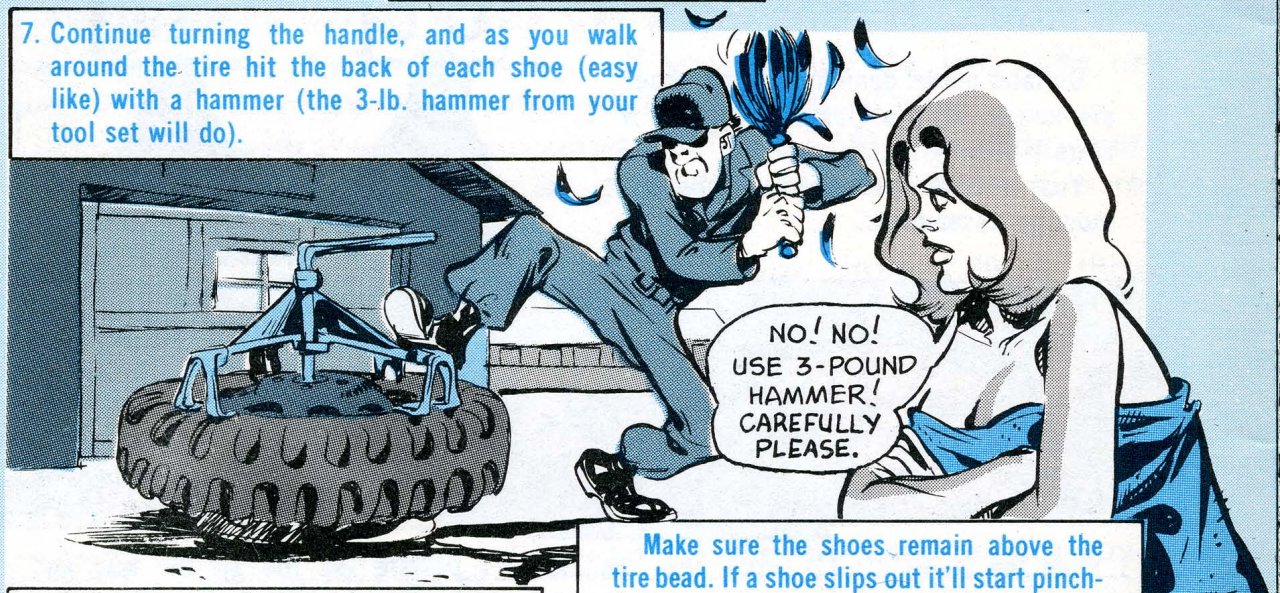
5. Slide the shoes back on the arms and continue turning the handle until the shoes sit on the tire.



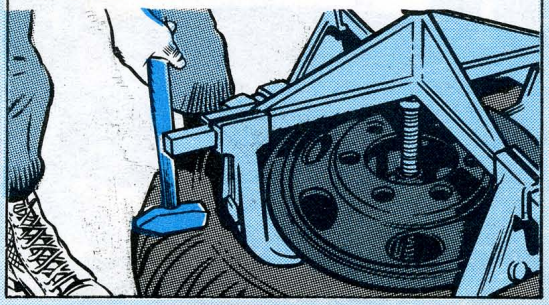
6. Place each shoe so its gripping edge sits above the tire bead and points straight to the rim. Locate the shoes so they're not over the valve.



7. Continue turning the handle, and as you walk around the tire hit the back of each shoe (easy like) with a hammer (the 3-lb. hammer from your tool set will do).



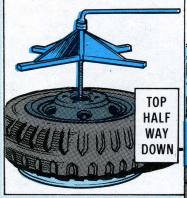
If the shoes don't have a nub to take the blow, aim your hammer carefully at the heel of the shoe.



Make sure the shoes remain above the tire bead. If a shoe slips out it'll start pinching the bead, and you'll be clamping the tire to the rim instead of pressing it off.

If a pinch occurs—back-off on the handle quick-like. Free the bead and reset the shoes above the bead. With the shoes in place continue turning the handle and smacking the shoes. In no time you'll break the tire loose, and you're done with that side of the tire.

4. Screw the top back into the base and turn the handle until the top's about half way down the shaft.



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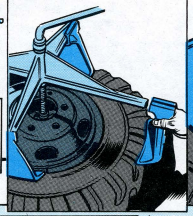

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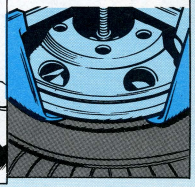

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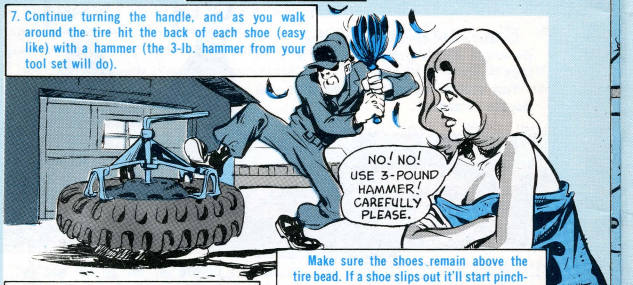

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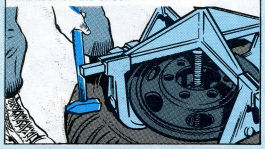

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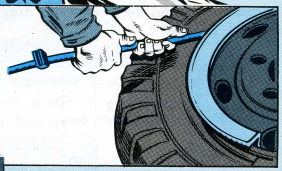
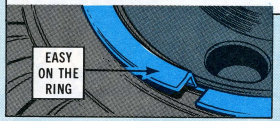
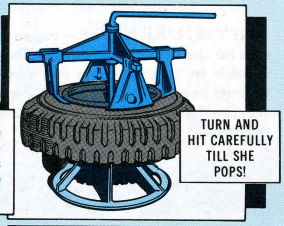
If a pinch occurs—back-off on the handle quick-like. Free the bead and reset the shoes above the bead. With the shoes in place continue turning the handle and smacking the shoes. In no time you'll break the tire loose, and you're done with that side of the tire.

8. Take the wheel off the demounter and remove the tire's lock-ring with the lock-ring tire tool (FSN 5120-765-8536). To unlock the ring insert the hooked end of the tool into the lock-ring slot, and push down on the tool. Use the other end of the tool to pry the ring off the rim. Take it easy—rough prying will spring the lock-ring and ruin it.

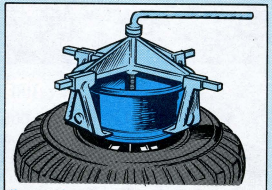




9. Turn the wheel over on the base of the demounter. Replace the top of the demounter and the shoes, and you're ready to press off the other side of the tire. Work the demounter like before.



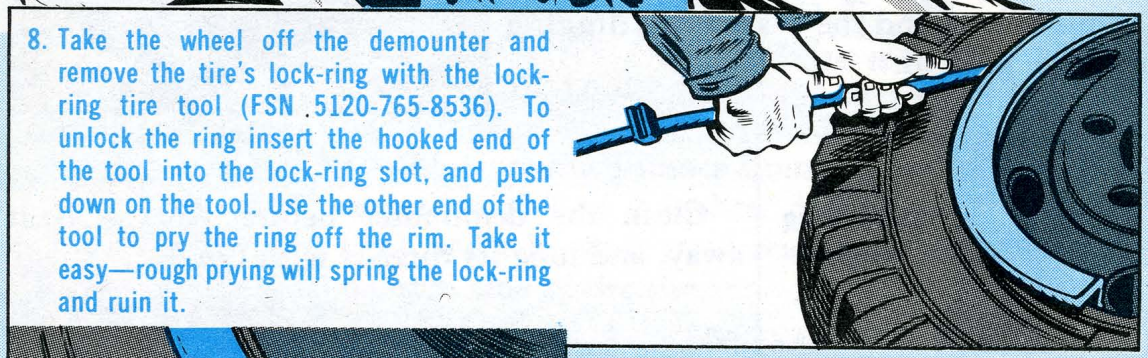
HOLD ONE—Before you start pressing that side of the tire, be sure to push the valve back behind the rim so it won't be caught in the wheel opening and be squashed as you press the tire off.



Keep turning the handle and hitting the shoes, if needed, until the tire pops off the rim.

PS MORE

8. Take the wheel off the demounter and remove the tire's lock-ring with the lock-ring tire tool (FSN .5120-765-8536). To unlock the ring insert the hooked end of the tool into the lock-ring slot, and push down on the tool. Use the other end of the tool to pry the ring off the rim. Take it easy—rough prying will spring the lock-ring and ruin it.



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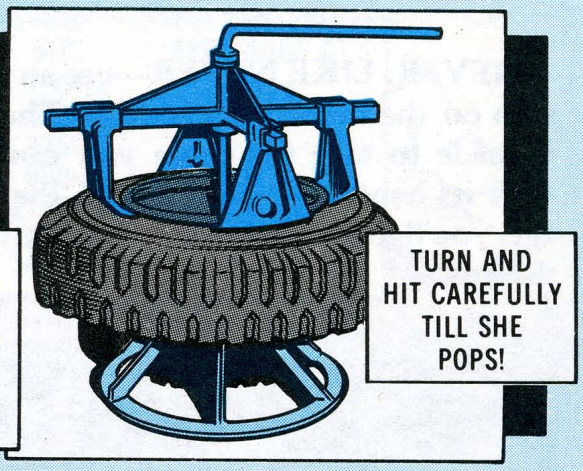

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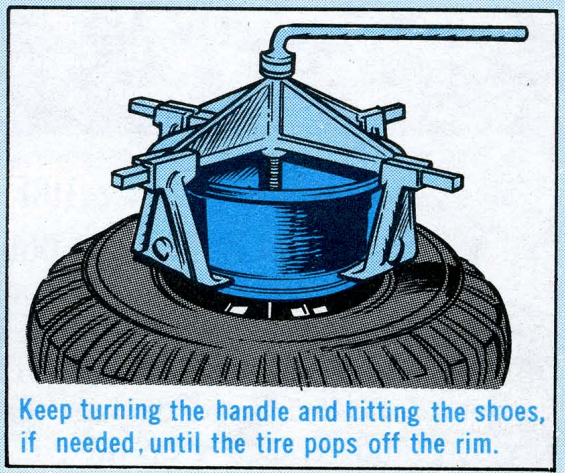


Keep turning the handle and hitting the shoes, if needed, until the tire pops off the rim.

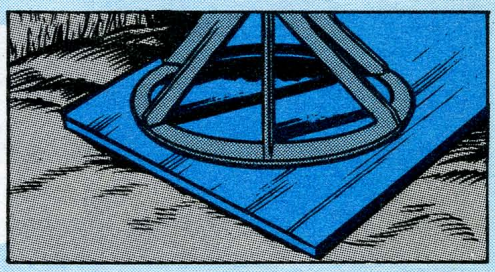
P.S MORE

HELP YOUR DEMOUNTER

To make the job easier, brush some tire demounting lube (FSN 2640-045-0571) along the tire bead and rim flange, before you apply the pressure. See para 2-20, TM 9-2610-200-20 (Jan 71).

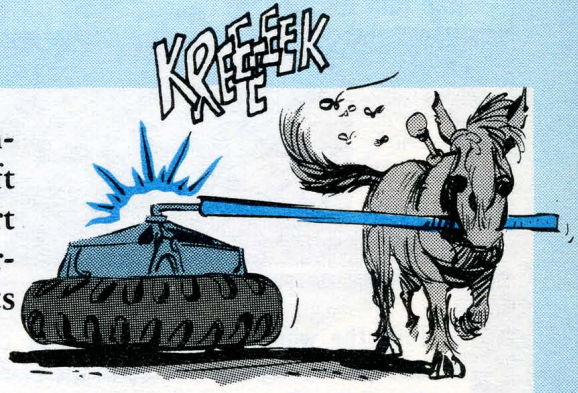
Be extra generous with the lube if a tire's rust-marked or stubborn-looking, and let the lube soak in for awhile before demounting the tire.

Use the demounter on a hard surface. In the field try for a board or whatever hard surface you can swing. The floor'll keep the base and the shaft from digging into the ground.



Clean the demounter before you stash it away, and lube its threads with GAA.

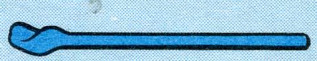
NEVER, LIKE NEVER—use an extension on the demounter handle. The shaft is made to take the force you can exert with its handle. If you increase the leverage you'll bust the shaft, or tear up its threads.



INFLATING AID

If there's no tire gage handy for inflating your tires, you can also use the demounter to safety the lock-ring while you inflate. Just screw the demounter top down so the 4 shoes are 1 inch above the ring-rock. Keep the shoes sitting there until you're done inflating.

TIRE IRONS

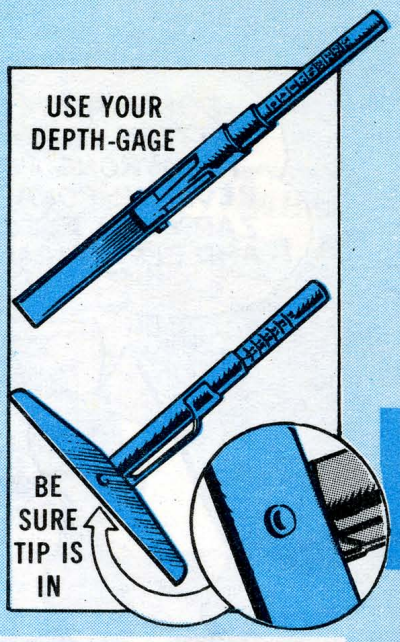


Never keep sharp or pointed tools in your tire-changing area. They're tire and rim killers. Use only the authorized tire irons in your tool kit. Use those tools with care—always, but especially when you're breaking or holding the bead, or working with the lock-ring. If you wreck the bead the tire's done for. If you damage the lock-ring you're done for . . . it's the part that holds your tire on the rim.

TREAD CHECK

Your tire-tread depth-gage (FSN 5210-019-3050) is another real important tire-saving tool. It tells you when to demount tires for rebuild care. See Chap 2, para 2-1h, TM 9-2610-200-20.

The gage folds up for easy storing in your pocket while you're working tires. To open it pull the contact bar out to form a T. Before you open it make sure the plunger tip is pulled in all the way—or else you'll bend it.

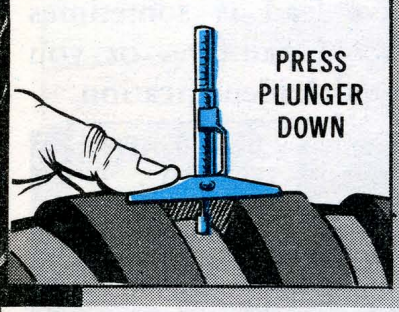


Minimum tread on a servicable military-tread tire is 1/8 in (or 4/32 ... since the depth gage reads in thirty-seconds of an inch). To use the gage on military tires:

—Measure the distance from the tire's crown—or centerline, (3/4 to 2 inches, depending on the tire size), and take your tread reading at that point ... on each side of the tire.

FOR EXAMPLE:

TIRE SIZE:	FROM CENTERLINE SPOT GAGE AT:
700-16	¾ in
900-16	1¼ in
825-20	1¼ in
900-20	1¼ in
1100-20	1½ in
1200-20	1½ in
1400-20	2 in

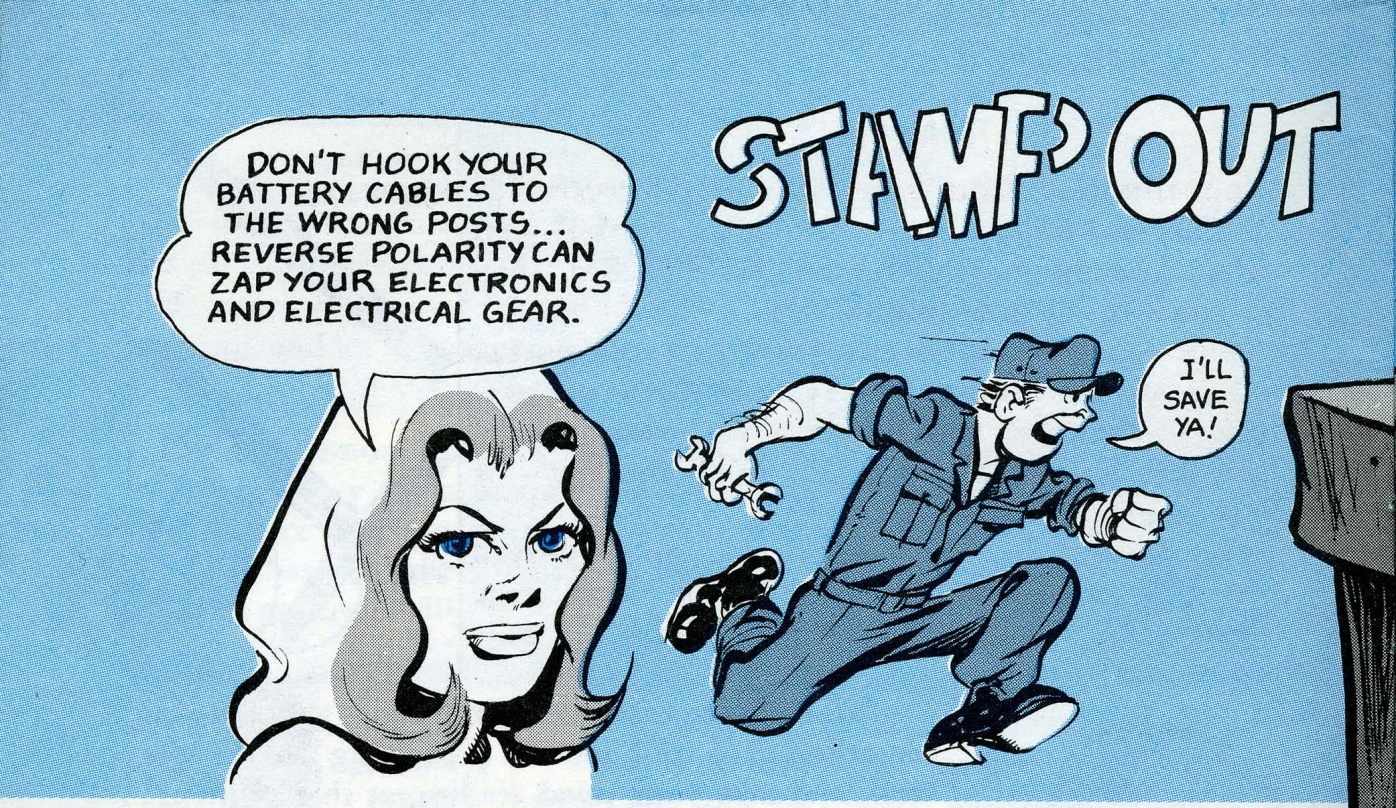


—Place the contact bar so it's parallel with the tire's centerline. Press the plunger down until its tip touches the center of the tread groove. Read the tread depth on the gage.

Check the tread at 3 evenly spaced points around the tire. Start at the valve stem on a mounted tire, or mark your starting point on an unmounted tire.

On commercial-type (passenger and truck) tires, minimum serviceable tread is 1/16 in (or 2/32 on gage). On these tires, too, measure the tread at 3 evenly spaced points—as close as possible to the tread centerline. Bridge the tread groove with the contact bar and press the plunger into the center of the groove to get your reading.

PS END



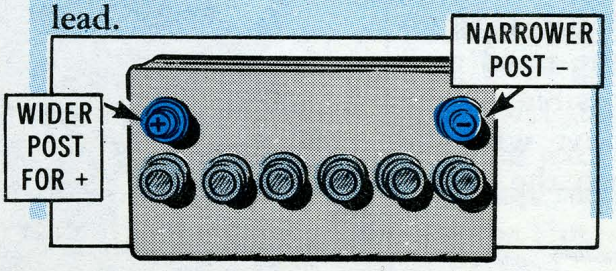
THE LIST OF VICTIMS: radio sets, vehicle alternators, generators and batteries; radioteletypewriters; electrical systems, other communications equipment... the list is endless.

And all because some guy in a hurry didn't take the trouble to put a battery cable on the right post.

So let's look at the hookups which head off reverse polarity:

In the first place, the battery posts are different in width. The positive or + post is almost always wider. It's usually identified with the + or a "P" stamped into the top.

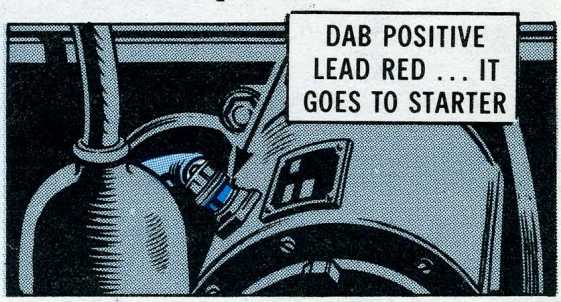
THE NARROWER NEGATIVE POST is usually identified with a – sign or an "N" stamped into it. If the + or – sign isn't there, or bunged up, just remember that the wider post is for the positive lead.



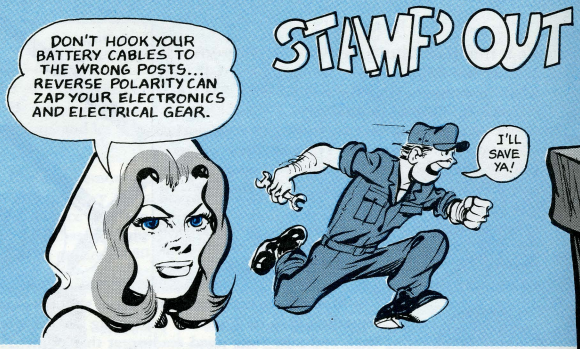
Now for the leads themselves:

The positive lead terminal, naturally, would be wider if it's been used on a battery before. Some are larger right from the factory.

The positive lead is sometimes dabbed with red paint ... or you can dab it for quick identification.



THE POSITIVE LEAD always ends up at the starter, either going directly from the battery to the starter, or through a solenoid to the starter.



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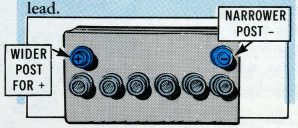

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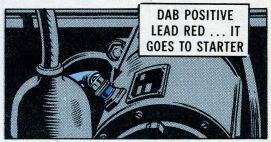

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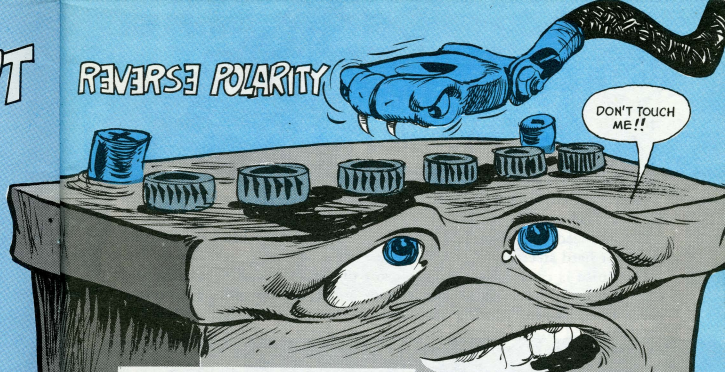
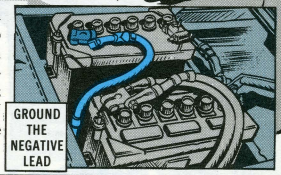
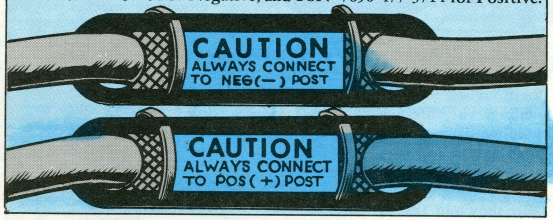


The negative lead is grounded directly from the battery post to a bolt on the engine or a bolt on the chassis frame. (The only exception to this is the 45-KW 400 Hz generators issued under LIN J37342. They have a positive ground polarity.)

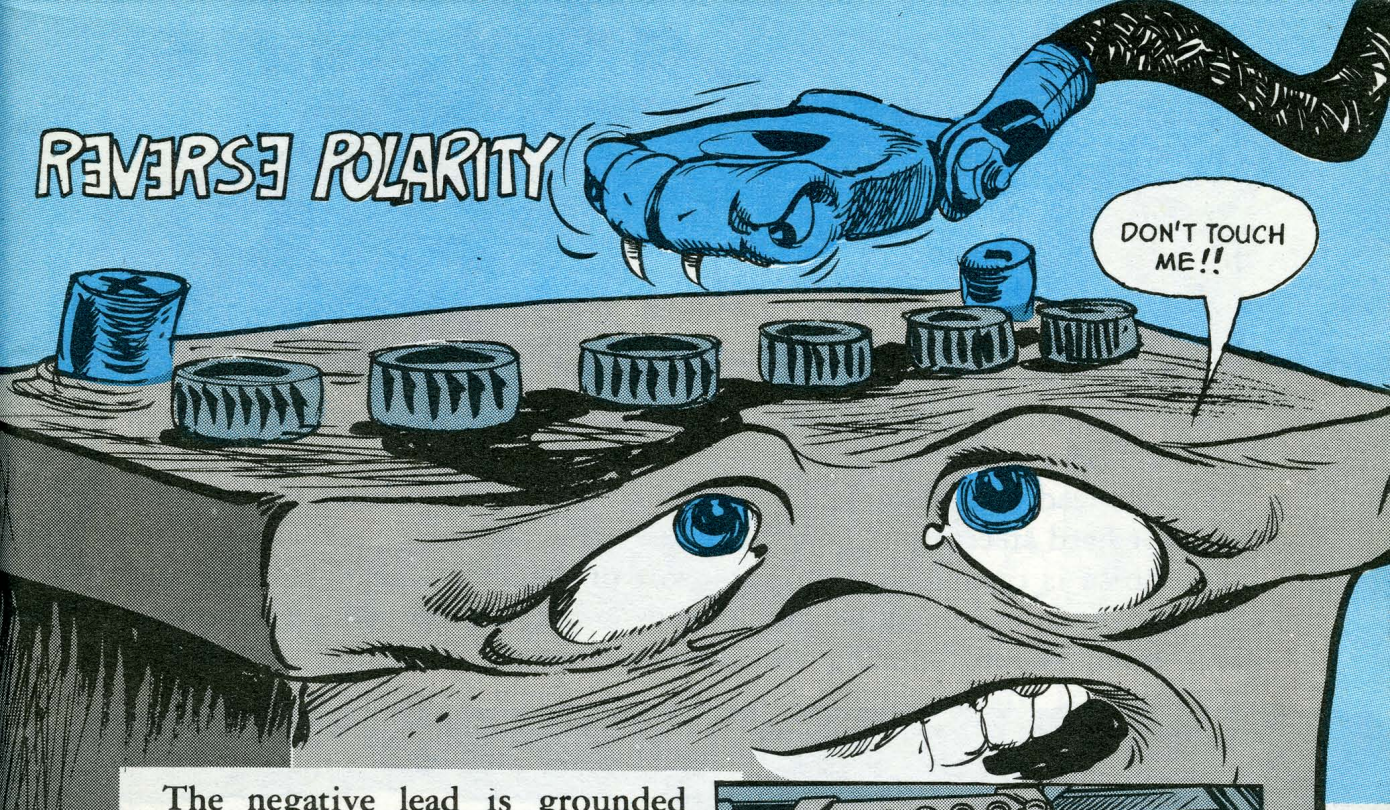


You can identify your cables by using Label, battery cable lead FSN 7690-477-3715 for Negative, and FSN 7690-477-3714 for Positive.



Remember those points... and even if someone reverses the position of the poles when they put in the battery you can't go wrong.

Put the battery in the way you take it out. Saves stretched cables... and a reverse jolt to equipment from a hurred cable connection.



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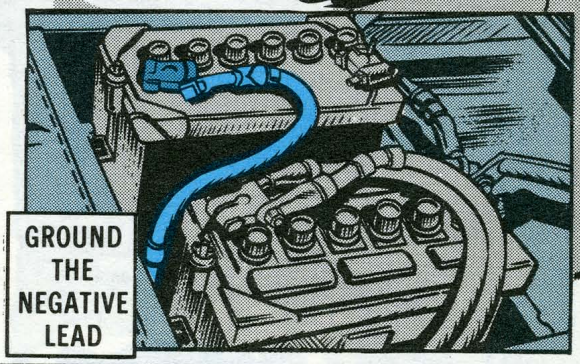

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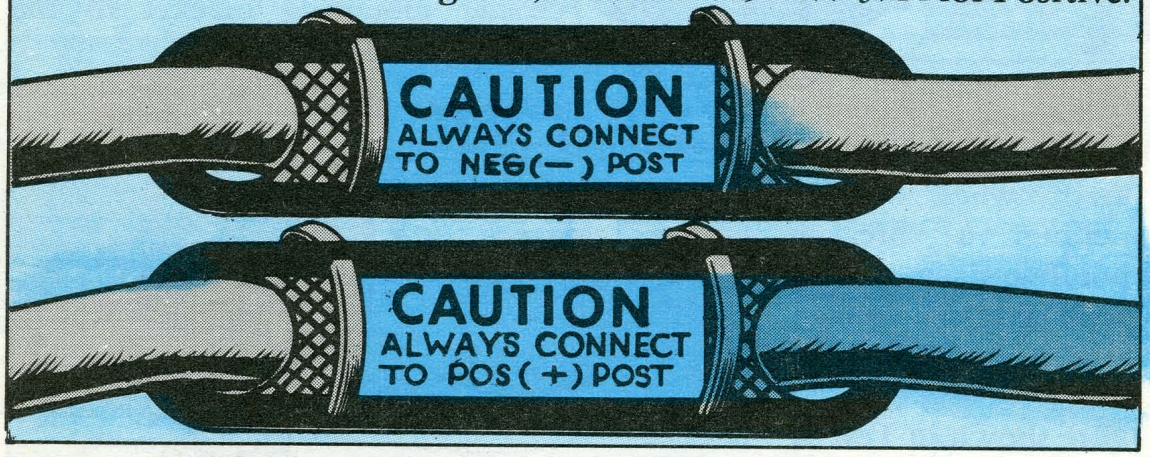

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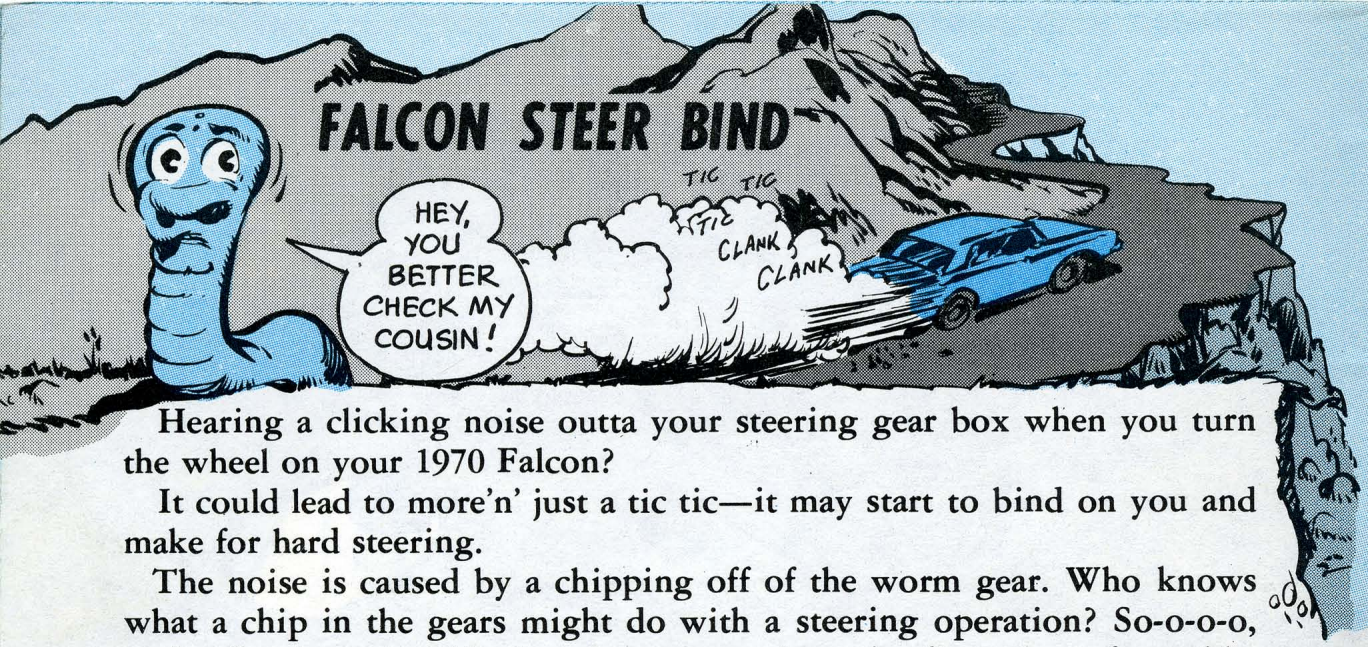
FALCON STEER BIND

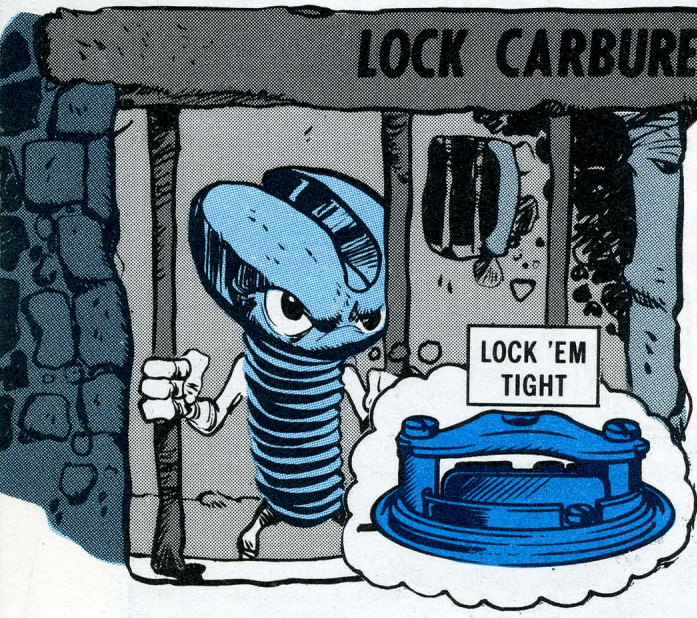


Hearing a clicking noise outta your steering gear box when you turn the wheel on your 1970 Falcon?

It could lead to more'n' just a tic tic—it may start to bind on you and make for hard steering.

The noise is caused by a chipping off of the worm gear. Who knows what a chip in the gears might do with a steering operation? So-o-o-o, get'er fixed pronto (during the warranty) at the first sign of trouble.

LOCK CARBURETOR SCREWS

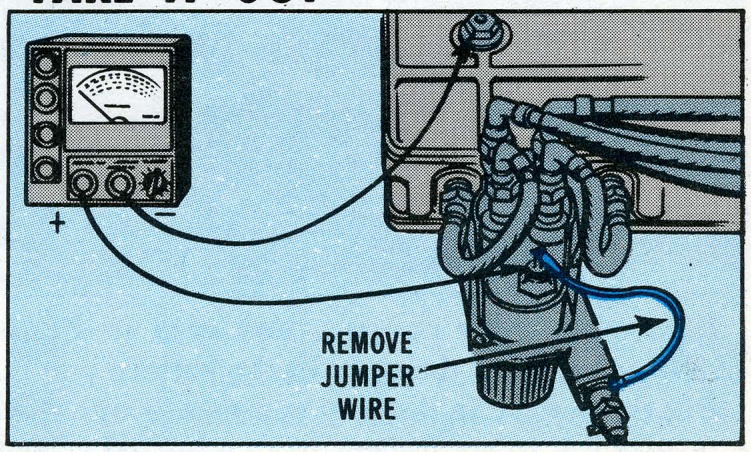


Chevrolet 1/2-ton pickups—especially '68/'69 models—may need their air cleaner bracket mounting screws locked. Other wise the screws may work out, drop thru the carb into the manifold ... and on into the engine.

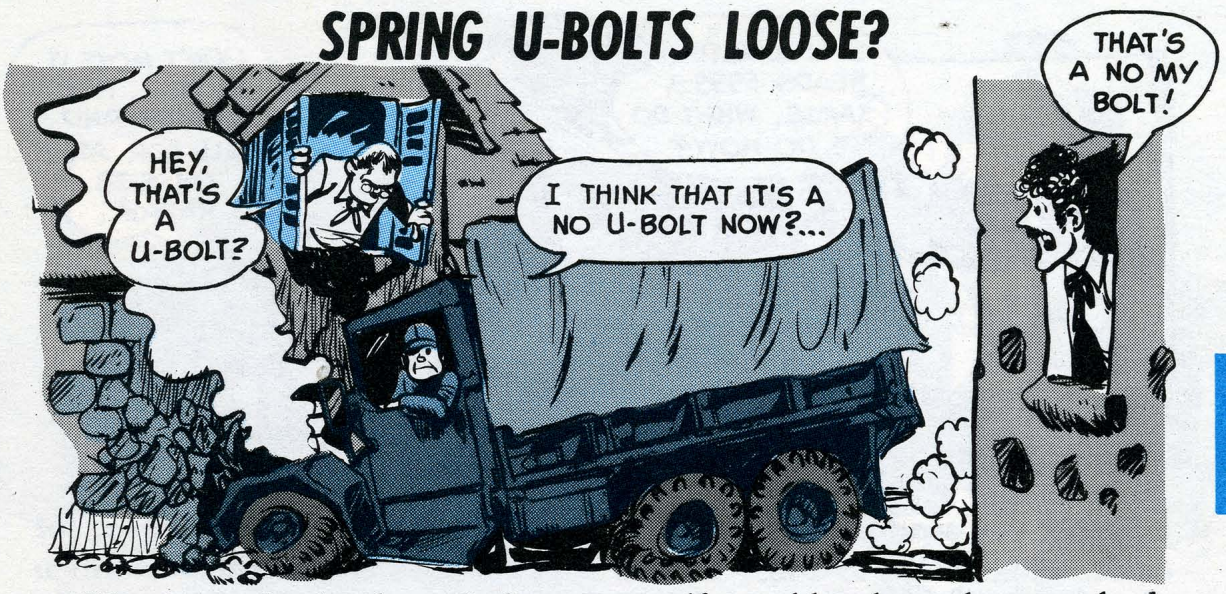
Use Sealing and Locking Compound, FSN 8030-081-2286—a drop on each screw holding the air cleaner mounting bracket to the carburetor throat.

TAKE IT OUT

No jumper wire is used when you're pulling a breaker point resistance test with your low-voltage circuit tester. Pay no mind to that jumper wire shown in Test 3, Fig 2-28, TM 9-2320-218-20 w/Ch 1 (Jan 70), for the M151-series 1/4-ton vehicles.



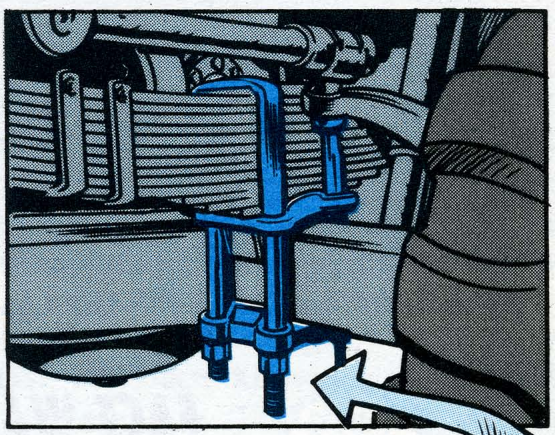
SPRING U-BOLTS LOOSE?



Why learn the hard way? Save yourself trouble—learn by somebody else's experience.

It seems you'd be real smart to keep a close eye on the front spring U-bolts of your new M809-series 5-ton truck. You could wind up with a busted axle. Or, worse, your steering might go out on you.

First, check the lower spring seat for any signs of fastener looseness or axle shifting.



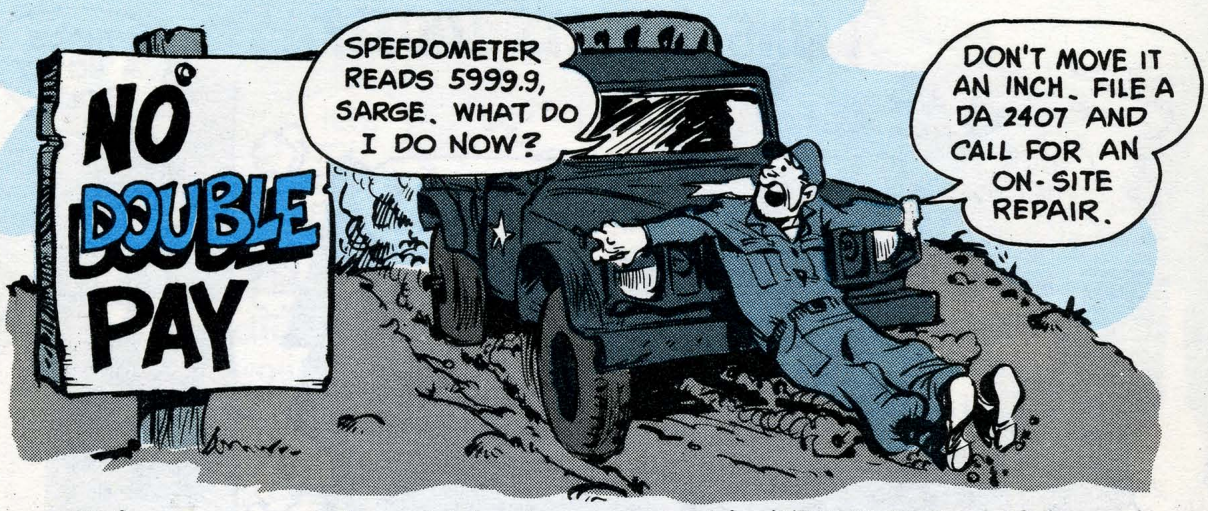
This could mean the alignment pins on the axle have sheared—and that means you get 'em replaced quick!

Now slap your torque wrench on those U-bolts and pour on 350-400 lb-ft torque to make sure they're tight.

Make this inspection and torque-check again when your M809 has rolled up its first 1,000 miles. And again at 3,000, 6,000, 9,000 and 12,000 miles. And every time you pull the "S" service thereafter.

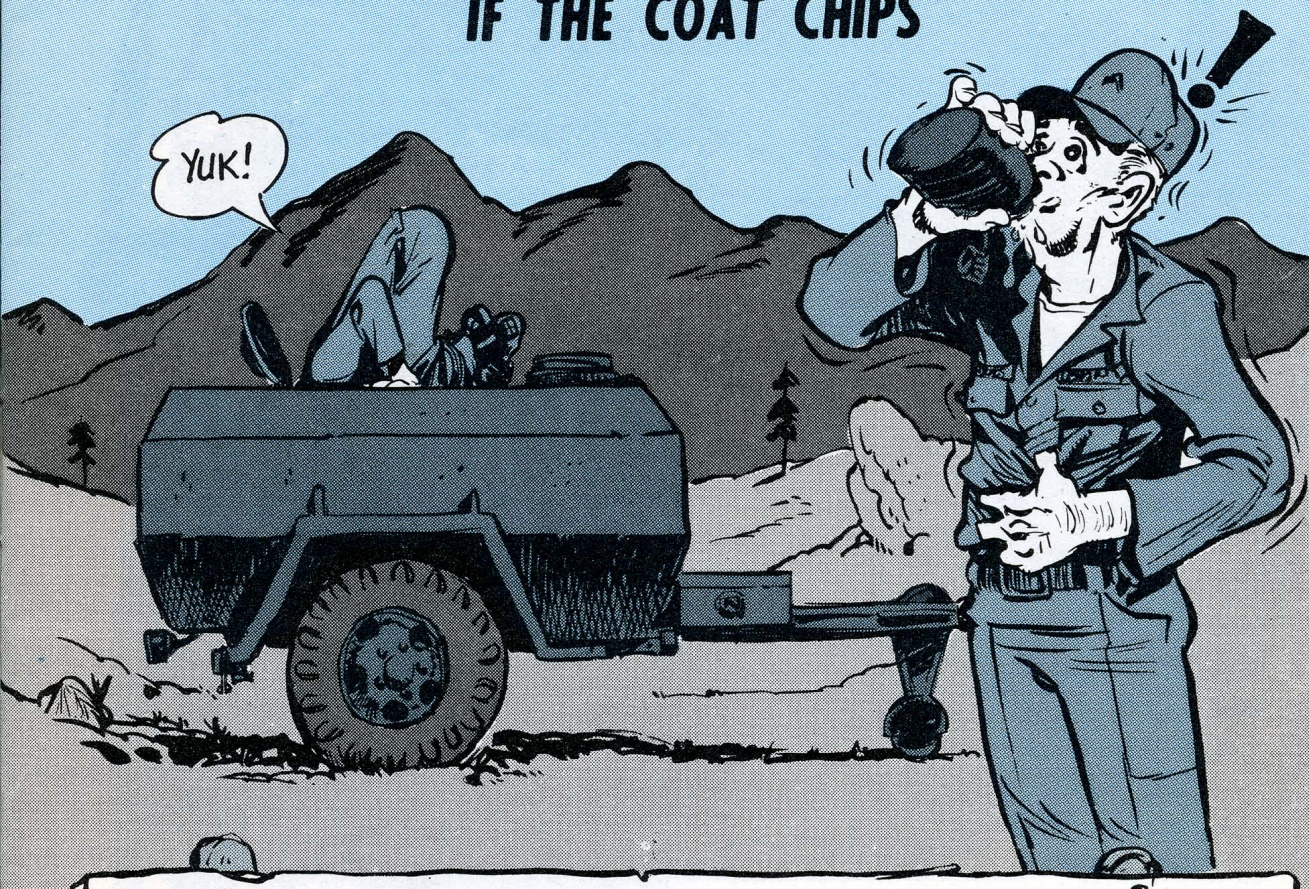
5/4 CHAIN COVER?

Need a new tailgate chain cover for your M715 1 1/4-ton truck? Your support can make all you need from Duck, cotton, FSN 8305-170-4956—same as they do for any other truck. They can use your 5/4's old rubber cover for a pattern.



Before you send the vehicle alternator, FSN 2920-909-2483, to the manufacturer for repair, make sure it's not eligible for free replacement under the vehicle warranty. Manufacturer repairs at a cost of $85 each are for use after the warranty expires. Vehicle log records should show warranty dates, including dates of alternator replacements on DA 2408-10. (As stated in TM 38-750 guidelines for this form, all components on which usage data is required should be listed. So you record all components and replacements covered by warranty). Warranties cover that alternator (whether new or factory repaired) for 2 years or 6000 vehicle miles. So don't "buy" that alternator twice. When it's covered by warranty file a claim on DA 2407.

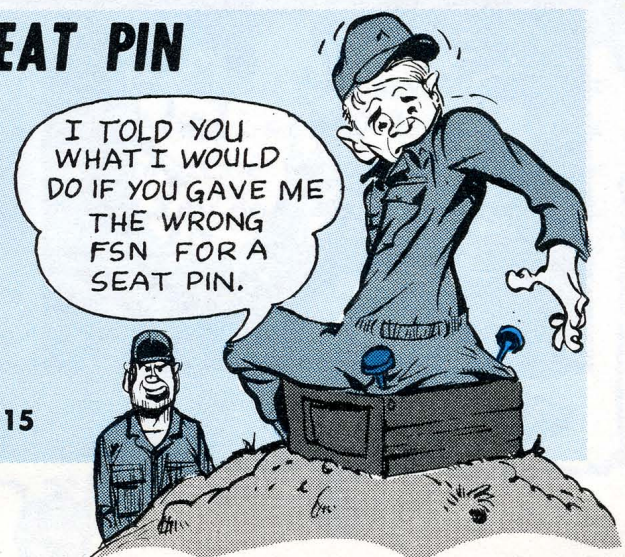
IF THE COAT CHIPS



Don't get shook on that epoxy coating over the fiberglass interior in your M149 1½-ton water-tank trailers. It's been known to chip and get a bit shabby lookin', but don't worry about it. The coat was put on to give the fiberglass time to age so it wouldn't affect the taste of the water. After 3 months the coat has done its job. Just flush out the chips if they show up loose in the tank. You don't have to put on another coat.

M151 SEAT PIN

Now you can get seat hold-down pins—the real thing—for your M151-series 1/4-ton truck. FSN 5340-871-3858 brings the spring-type pin, and FSN 4010-273-2983 is for a 6-in piece of chain.



M725 GAS FILL . . .

DRIP BRINGS BIG BILL

A loose fuel filler pipe hose clamp on your M725 1¼-ton ambulance is bad news.

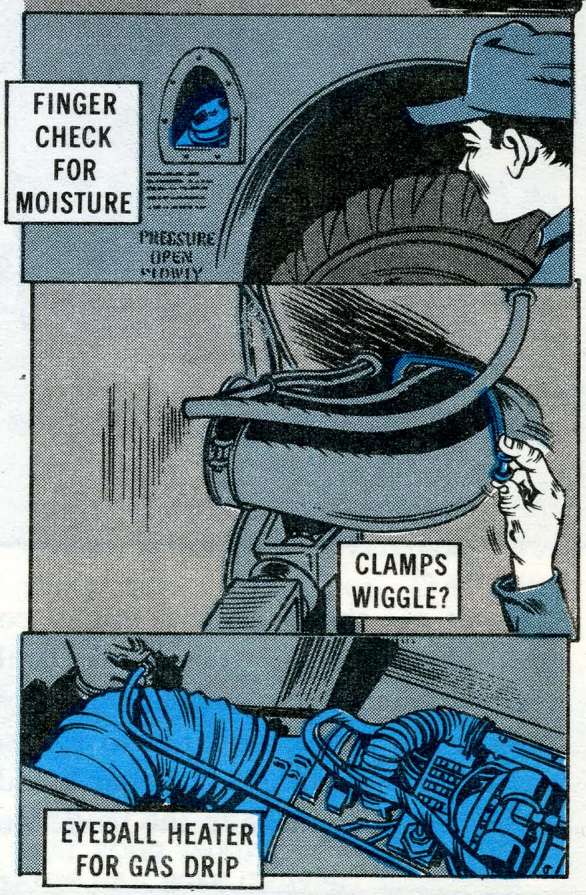
Any drip from that neck is all too close to the rear body heater unit.

But the lucky thing is, you can check it out easy. Look just past the top of your left rear tire. If you don't see moisture on the hose joint, make sure—rub it with your finger for dampness.

Then try to wiggle the clamps. Any movement is too much.

Last, clear the litters and cushions from over the heater. Scan and smell carefully for drip oozing thru the floor cracks.

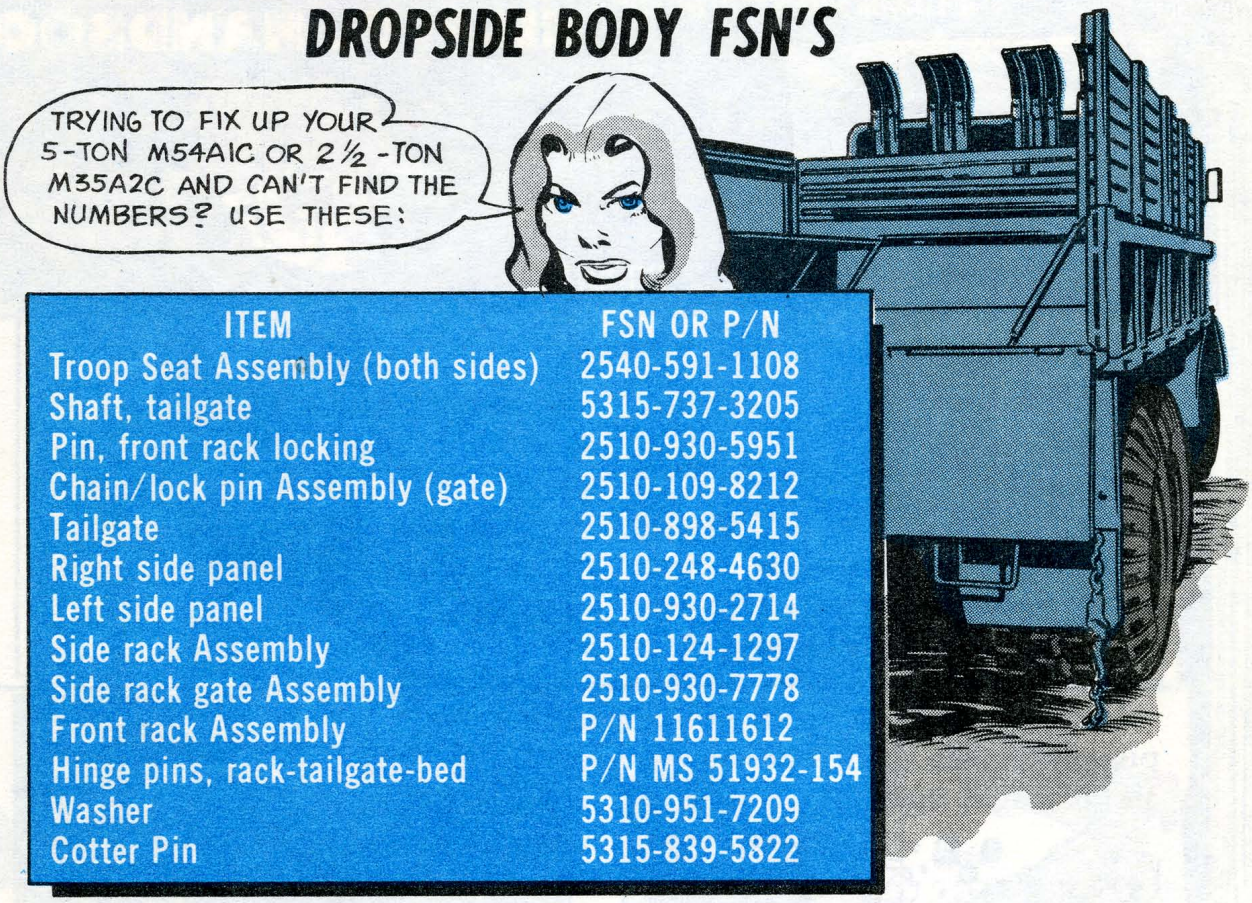
The whole set-up needs to get a good lookover every time you come back from a drive in the boondocks. Report any trouble fastest—a gasoline drip is No. 10.



AMBULANCE LIGHT

Here's a couple of stock numbers for the surgical light in your M725 1¼-ton ambulance. You needn't buy the whole expensive fixture. FSN 6220-368-4940 gets the blue lens. FSN 6240-295-2421 brings a new sealed-beam lamp.

DROPSIDE BODY FSN'S



ITEM	FSN OR P/N
Troop Seat Assembly (both sides)	2540-591-1108
Shaft, tailgate	5315-737-3205
Pin, front rack locking	2510-930-5951
Chain/lock pin Assembly (gate)	2510-109-8212
Tailgate	2510-898-5415
Right side panel	2510-248-4630
Left side panel	2510-930-2714
Side rack Assembly	2510-124-1297
Side rack gate Assembly	2510-930-7778
Front rack Assembly	P/N 11611612
Hinge pins, rack-tailgate-bed	P/N MS 51932-154
Washer	5310-951-7209
Cotter Pin	5315-839-5822

Your big pain is lost pins—chain 'em, stow in the glove box, or cotter-pin 'em, but stick to an SOP.

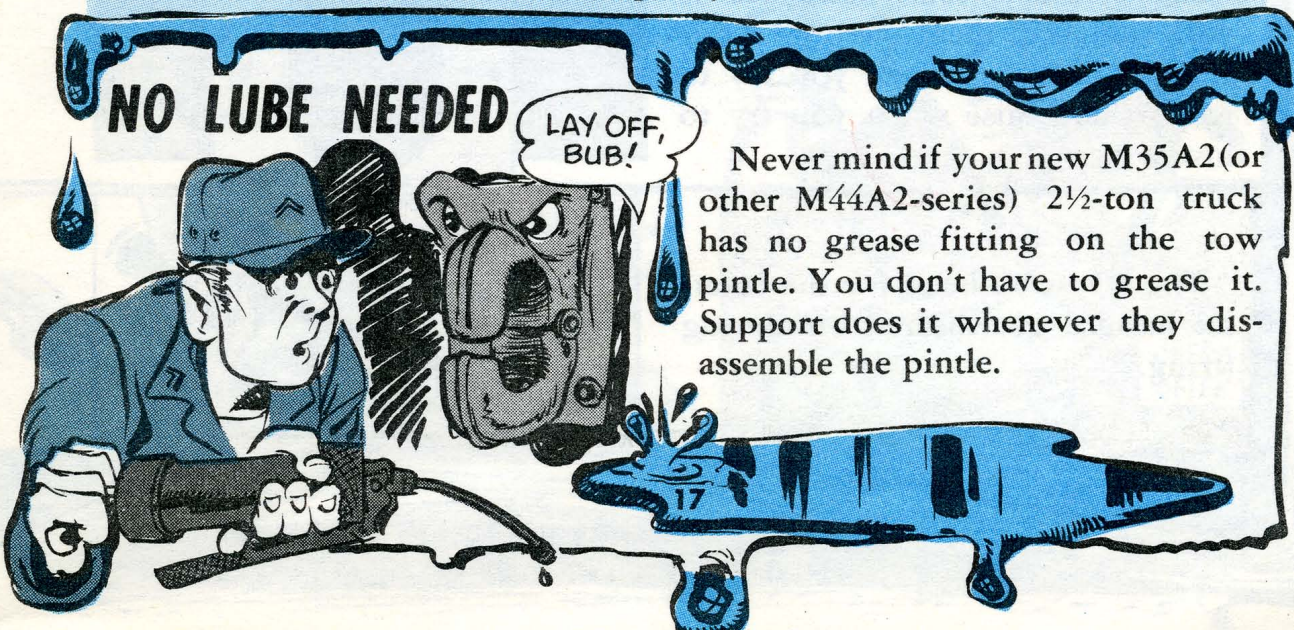
CABLES FOR M109 VAN

Do you need a power cable to run from a 10 KW generator to your M109 2½-ton shop van truck?

FSN 4910-395-1995 gets you a 7-ft job.

Or, if that's not long enough to reach, get a 25-footer under FSN 4910-395-1994. This one hooks up to your 7-footer and then to the van.

NO LUBE NEEDED



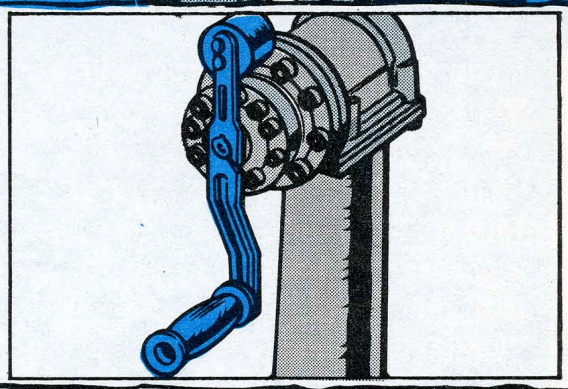
Never mind if your new M35A2 (or other M44A2-series) 2½-ton truck has no grease fitting on the tow pintle. You don't have to grease it. Support does it whenever they disassemble the pintle.

HELPFUL HANDBOOK

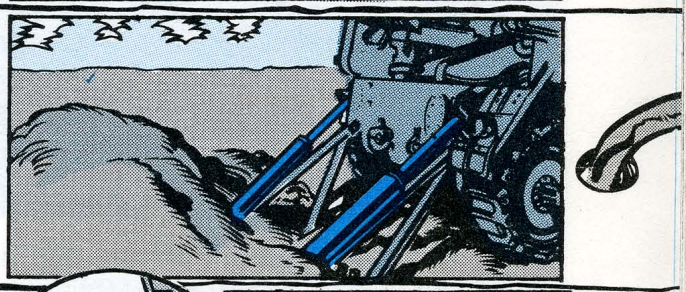
FIREPOWER

PROBLEMS

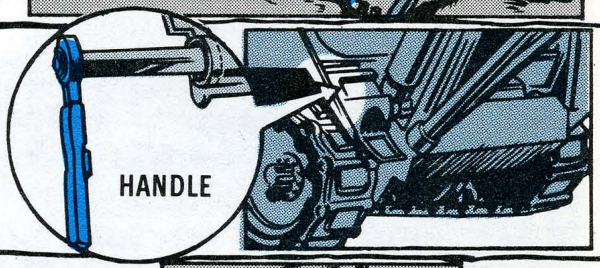
The torque lock on your manual elevating hand crank is likely to rust because water soaks through at the junction of the torque lock and elevating mechanism.



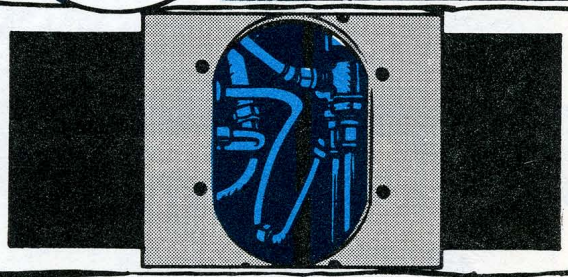
Dirt and sand on spade cylinder pistons makes them operate hard, and damages the seals.



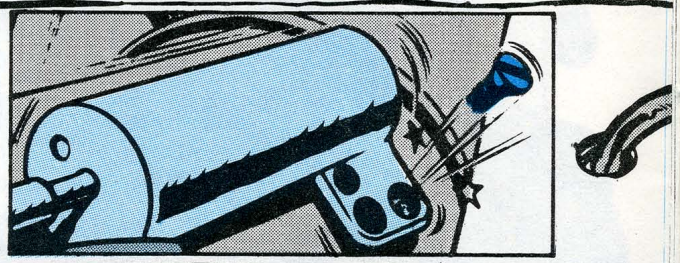
The spade control handle is made out of light metal and when it breaks off you may have a time getting it welded back on.



The supply and return lines on the spade cylinders look alike but if you connect them wrong your spade will lower when you try to raise it and raise when you try to lower it.



The 4 bracket bolts for the counter balance get sheared off during firing.



HELPFUL HANDBOOK ON PAINFULLY PUZZLING PROBLEMS

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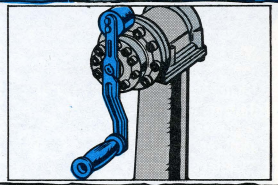

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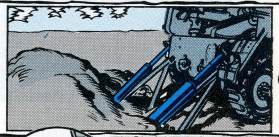

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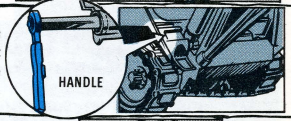


The supply and return lines on the spade cylinders look alike but if you connect them wrong your spade will lower when you try to raise it and raise when you try to lower it.

The 4 bracket bolts for the counter balance get sheared off during firing.

SOLUTIONS

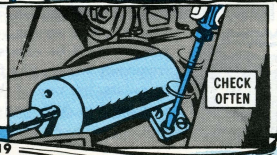
Cut the lock wire and take out the 2 access screws covering the access holes. Squirt about ½-ounce of hydraulic oil (MIL-H-6083 type only) into the holes and then replace and lockwire the access screws. Do this often and you won't have any problem with the torque lock rusting or sticking, even in high temperatures or long periods of operation.

Protect each piston with a pair of cloth sandbags cut apart and then sewn together at their ends. Also, set up some kind of penalty for anybody who steps on this area when getting on or off the vehicle.

Use a track pin instead. That way you will have a stronger handle and a steel-to-steel weld. (This is an emergency solution.)

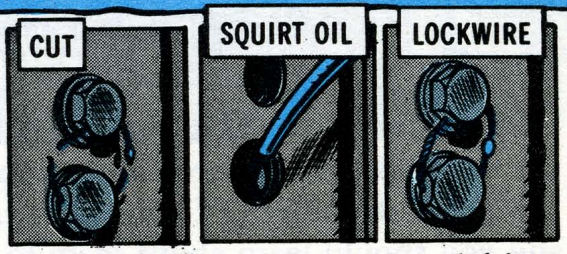
Identify the lines (a dab of paint, colored tape, whatever) before you disconnect them. That way you can get them back together right.

Check often during firing, keep the bolts tight and staked. Replace as needed.



ON PAINFULLY PUZZLING PROBLEMS

SOLUTIONS



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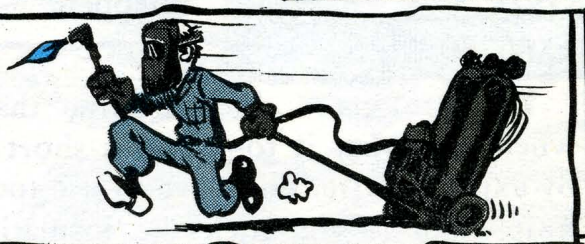

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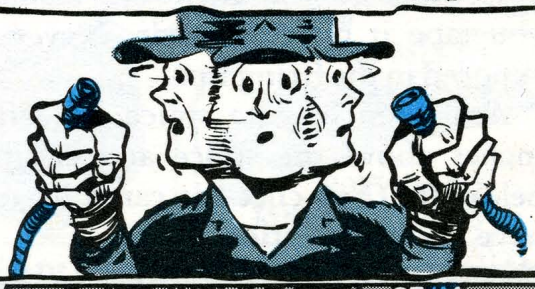

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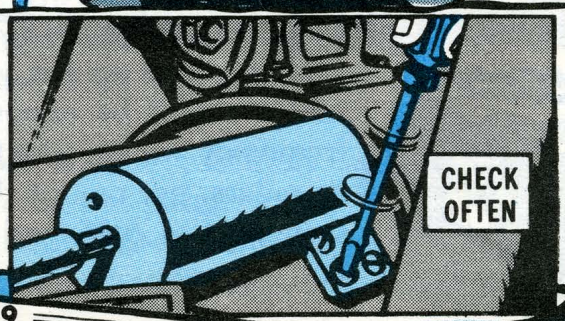


CLAYMORE

Your M18A1 Claymore mines are not likely to go **kaboom!** unless you set 'em off with the M57 firing device. 'Course there are a few exceptions and you should learn about them to keep your insurance rates low.

ELECTRICAL STORMS

Even if you have the firing line either capped or attached to an M57 (as you should have) it's not 100 per cent safe during an electrical storm. A lightning flash could still blow your mines. So, remember, stay away from the front and sides of mines during electrical storms. They are not likely to blow but it could happen.

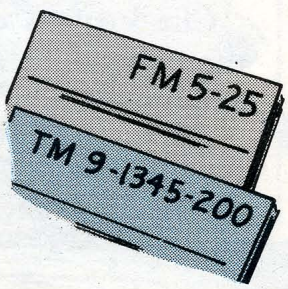
EXPOSED WIRE

You can get a dud—a mine that won't blow when you want it to—from a short circuit caused by exposed wire. You have to use tools—pliers and knife—but if you nick the insulation, make sure you tape it up afterwards. Never leave bare wire exposed in the firing line.

After you make a splice, tape it, starting a few inches above the splice and ending a few inches below it. Then check it carefully to make sure you have good insulation.

HIGH FREQUENCY (RF) WAVES

If you have to put your mines in a place where they'll be exposed to a lot of high-frequency waves, like from powerful radios or radars, use one of the non-electric firing systems FM 5-25 and TM 9-1345-200 tell you about.



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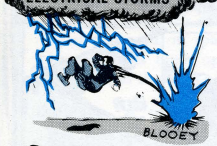

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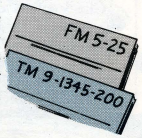
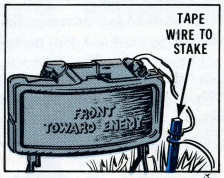


One other thing to remember: Tying the firing line to the leg of the mine is dangerous because it could upset or reposition the mine. Page 37 of TM 9-1345-200 which shows that setup has been superseded by page 6 of Ch 3 illustrating the latest way to do it. Tape the wire to a stake so the mine will not be shifted if somebody trips over the wire.



NEVER LOSE YOUR HEAD

One of the NEVER warnings for your portable mine detector is never allow the detector head to drop or rest on the ground while you're searching for mines. Always keep the detector head parallel to the ground during your search.

It'll be easier for you to do that if you use the new cap and short handle assembly provided by Ch 1 (Apr 70) to TM 5-6665-202-25P. They'll make the detector head stronger and easier to manage. FSN 6665-496-9628 will get you the cap, and FSN 6665-253-5505 is for the short handle assembly.

Replace both the cap and the short handle assembly at the same time. They're not interchangeable with the old parts.

If you have the Oregon Products Model MD-M, order a coupling assembly, FSN 6665-945-7206, to go with that handle assembly.

SAFETY TIPS

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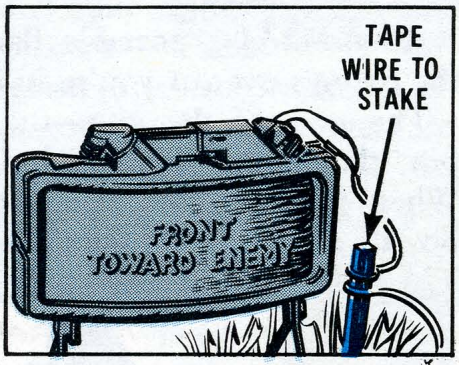

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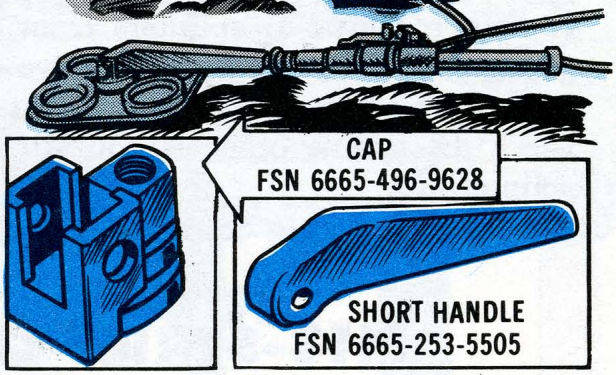

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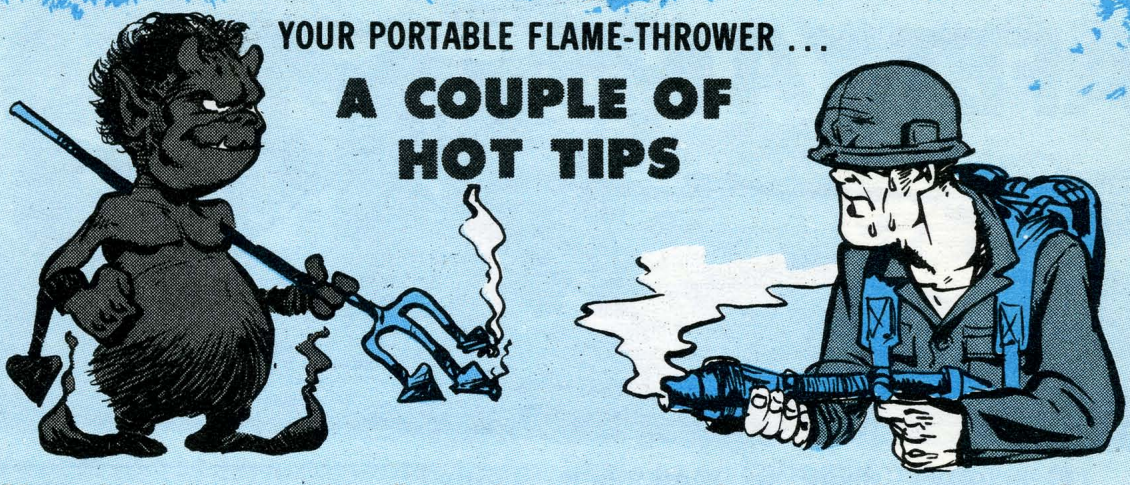
YOUR PORTABLE FLAME-THROWER ...

A COUPLE OF HOT TIPS



Your M2A1-7 portable flame-thrower must be cleaned soonest after the firing's over or you're in for a heap of trouble.

The guts of the gun—the inner and outer springs of the ignition pin, the needle valve and the barrel interior—will corrode real fast. When that happens you can bet the gun won't fire the next time. So always pull the after-operation cleaning called for in para 3-8, TM 3-1040-204-14 (Nov 65).

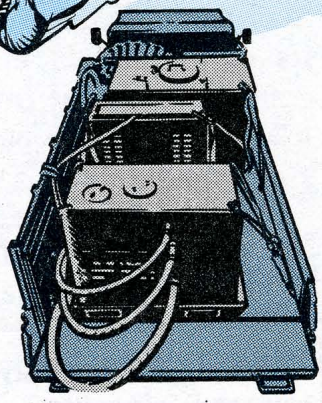
If you're mixing flame-thrower fuel by hand, make sure your wood paddle is clean and splinter-free. Never hit the paddle on the mixing container. Chips or splinters from the paddle can be forced into the gun group and jam the needle valve—and the gun won't fire.

Always use the hardest wood you can find to make your paddle, and check the paddle often as you stir, to make sure it's not chipping or splintering.

M13-SERIES COMPUTER TIP

If the ballistic computer in your M60- or M48-series tank gets out of whack, the very best maintenance you can give it is to switch computer power to the OFF position and leave it lay there for your support to fix. They are the dudes with the tools from the schools. If you try to fix it you might make it worse.

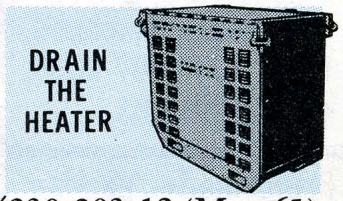
DECON FILL-UP



Your M9 truck-mounted decon or your M12A1 skid-mounted decon must always have the cleanest water you can get. When you fill your decon from a clear stream, pond, or lake remember to use a bucket . . . otherwise, the suction hose will take in silt, mud, and grit when it hits bottom. When the cruddy water's worked under pressure it'll damage your decon's pump, valves, and nozzles.

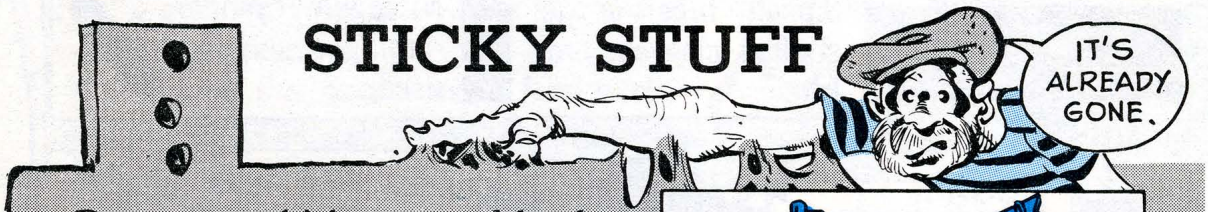
Just submerge the bucket (a clean 5-gallon can, empty STB decon can, or similar container) so it's covered by at least 2 inches of water. Put the suction-hose foot-valve inside the container, and make sure it stays there while you're filling up.

Cruddy water will also damage and plug up the heating tubes in the decon's M2 heater. So, as an extra caution, when you're done using the equipment, always let the heater drain completely when you disconnect it from the decon.



Water loading info for the M9 is covered in TM 3-4230-203-12 (Mar 65), and the filling scoop for the M12A1 is in TM 3-4230-209-12 (May 71).

STICKY STUFF



Does your vehicle-mounted hardware for the M11 decon bracket disappear from time-to-time?

Well, you can foil the bandits, easy. Leave the vehicle holes empty. Store the bracket-mounting hardware in the supply room along with the apparatus, and the bracket.

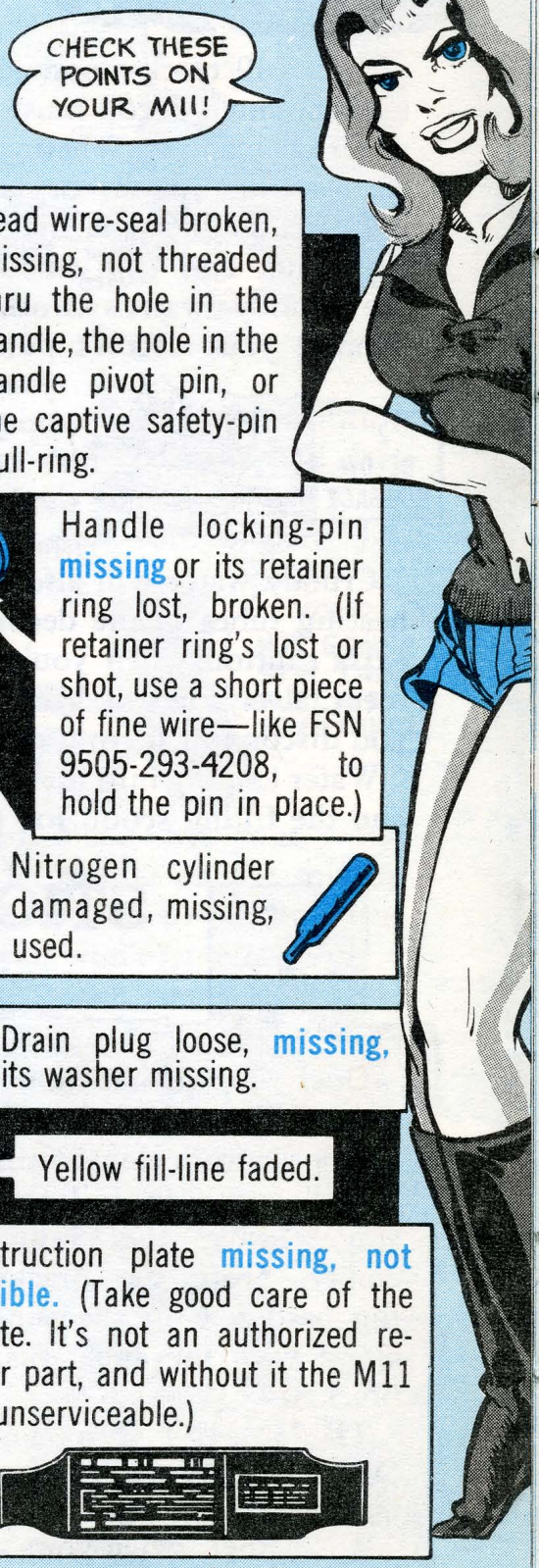
TB 750-942-1 (Jun 71), para 41, OK's the storage change for the hardware.

Also, if the waterproof tape, FSN 8135-877-7502, is scarce in your neck of the woods, the TB says it's OK to use any waterproof tape, as long as it's dark colored—for the toggle-hinge fix called for in para 4-12, TM 3-4230-204-13 (Oct 69).

BE YOUR OWN INSPECTOR . . .

YOUR

It's easy PM all the way on your M11 portable decon. But tending to its simple needs is a must—especially checking it for leaks, broken, missing or loose parts, rust corrosion and pitting.



Loose, thumb lever or handle **damaged.**

Nozzle loose, **faulty,** clogged (unplug it with a piece of wire, paper clip, etc., never remove the nozzle.)

Threads damaged (use antiseize compound, FSN 8030-087-8630, on the threads).

Preformed packing broken, worn, **missing.**

Siphon tube or its strainer clogged, **broken.**

Lead wire-seal broken, missing, not threaded thru the hole in the handle, the hole in the handle pivot pin, or the captive safety-pin pull-ring.

Handle locking-pin **missing** or its retainer ring lost, broken. (If retainer ring's lost or shot, use a short piece of fine wire—like FSN 9505-293-4208, to hold the pin in place.)

Nitrogen cylinder damaged, missing, used.

Threads **damaged.**

Drain plug loose, **missing,** its washer missing.

Yellow fill-line faded.

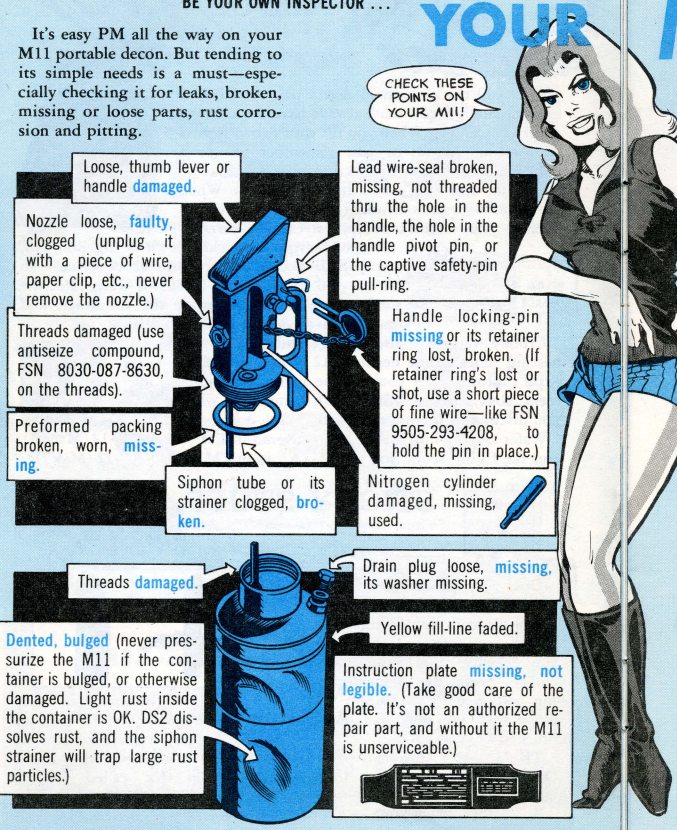
Dented, bulged (never pressurize the M11 if the container is bulged, or otherwise damaged. Light rust inside the container is OK. DS2 dissolves rust, and the siphon strainer will trap large rust particles.)

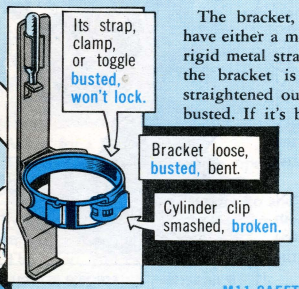
Instruction plate **missing, not legible.** (Take good care of the plate. It's not an authorized repair part, and without it the M11 is unserviceable.)

BE YOUR OWN INSPECTOR ...

YOUR M11 DECON

It's easy PM all the way on your M11 portable decon. But tending to its simple needs is a must—especially checking it for leaks, broken, missing or loose parts, rust corrosion and pitting.





The bracket, packaged with the M11 may have either a metal strap or a nylon strap. The rigid metal strap often gets stomped on when the bracket is empty. The bracket can be straightened out and used—as long as it's not busted. If it's broken, replace it. The bracket with the nylon strap will last longer, 'cause the strap's more flexible, more compact. And, it's the one you'll get as a replacement. It's covered by the same FSN as the old one, FSN 4230-776-4385.

M11 SAFETY

The M11's for deconning equipment only. Never use it on your clothing, or on friendly neighbors. Wear your protective mask when you use the M11, and if DS2 gets on your skin blot it off and wash with water.

Never use the decon as a fire extinguisher, and keep it away from flames. Its mixture will burn.

You get 2 nitrogen cylinders for the M11, but you use only 1 cylinder to pressurize it. If 1 cylinder doesn't empty the M11, then use the other one—and shake the M11 good before using it.

Drain the M11 after use, and use a rag to wipe DS2 from outside the container. Chuck the contaminated rag according to local SOP.

The M11 is covered by TM 3-4230-204-13 (Oct 69) and its Ch 1 (Sep 70).

And, be sure you have Ch 1. It lists a new lead wire seal (FSN 5340-835-9815), a new preformed packing for the container (FSN 5330-180-9903), and corrosion inhibitor (FSN 6850-865-2916), for use inside the container, when you store the M11 empty.

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SUFFERIN' DISPERSER HANG-UP?

Count to 10 and relax.

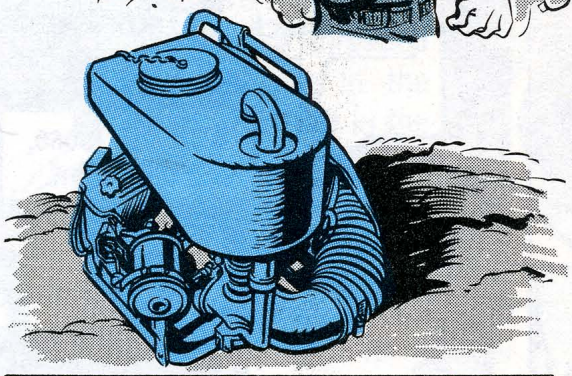
Things aren't as bad as they look with the spark plug of the M106 riot control agent disperser.

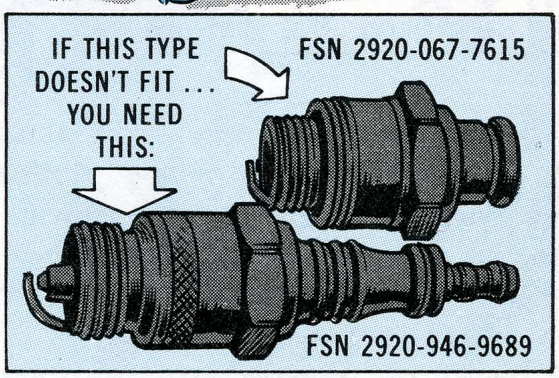
If the recessed spark plug, FSN 2920-067-7615 that's listed in TM 3-1040-254-23P (Oct 68) doesn't fit, it means you've got the later model disperser.

What you need then is the conventional-type spark plug FSN 2920-946-9689.

Sure, things got tangled when the conventional plug dropped in on the scene, what with adapters, recessed and conventional plugs and unmatched connectors.

But don't let the jumble get your goat. Just order the type plug you already have on the disperser and you're in business.



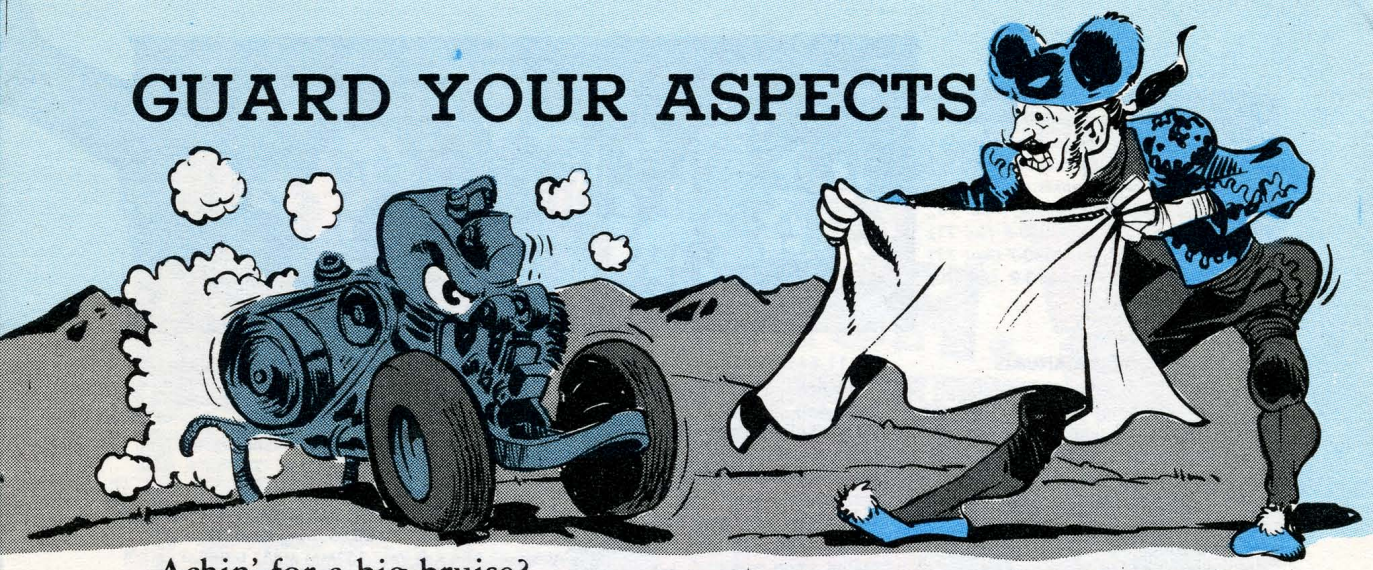


M9 DECON CHECK-UP

Your M9 decon suffering from one of these ailments: water collecting in the storage chest and lower clutch splash shield; mud and water in the friction clutch assembly; having trouble lubricating the upper clutch, or hooking up the M2 water heater?

MWO 3-4230-203-35/1 (Apr 67), will cure these ailments. Check your log book for an entry on DA Form 2408-5. If the MWO hasn't been applied, better send a DA Form 2407 to support. If it has been applied and no entry made, record and report according to paragraph 4-7d(3) of TM 38-750.

GUARD YOUR ASPECTS



Achin' for a big bruise?

You can get one fast if you operate an air compressor without its drive-belt guard.

A frayed or worn belt could let go and whip around your neck.

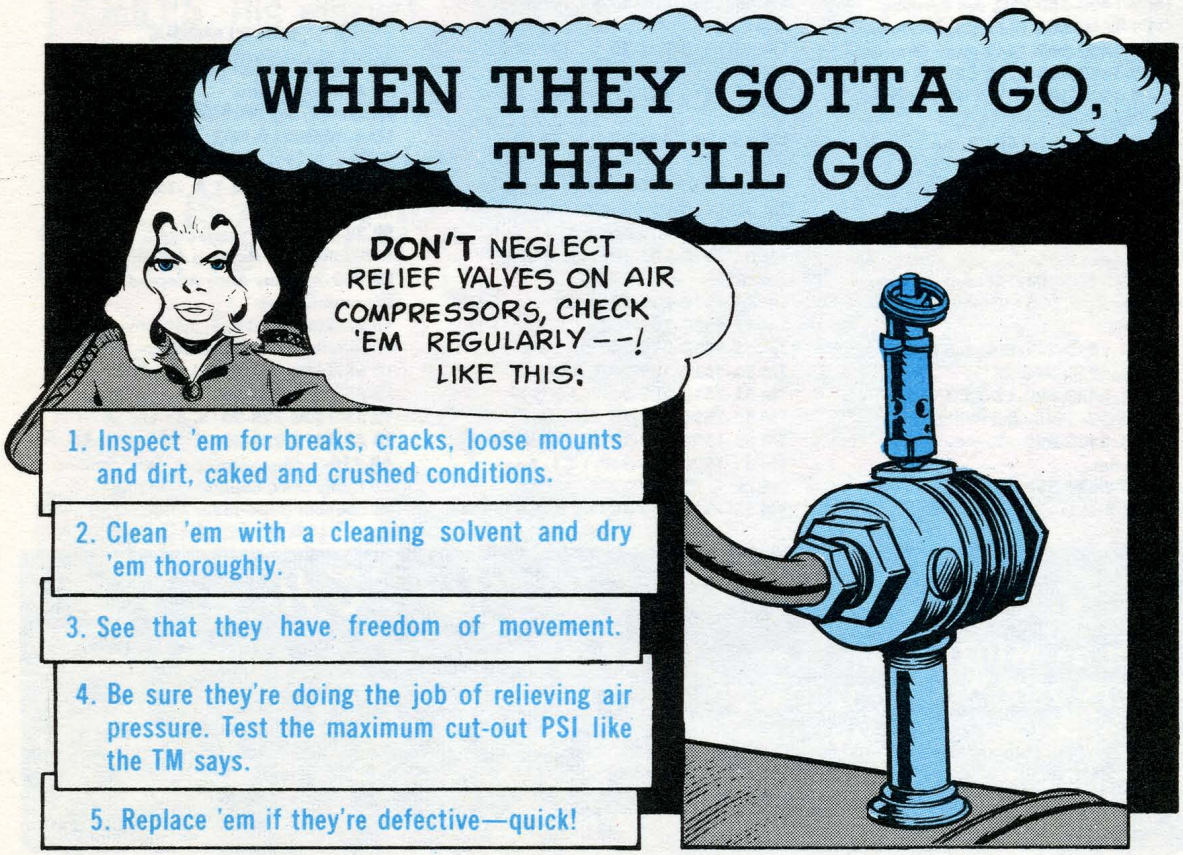
It also wouldn't take much for a cracked flywheel to take off and konk you on the noggin.

Then, too, you can imagine what would happen if an arm or leg got caught in a spinning belt or flywheel.

So don't take chances.

Never operate an air compressor with the belt guard off.

WHEN THEY GOTTA GO, THEY'LL GO



This is a selected list of recent pubs of interest to organizational maintenance personnel. This list is compiled from recent AG Distribution Centers Bulletins. For complete details see DA Pam 310-4 (Jun 70), and Ch 4 (Feb 71), TM's, TB's, etc.; DA Pam 310-6 (Jul 71), SC's, and SM's; DA Pam 310-7 (Apr 71), MWO's; and DA Pam 310-9 (Jul 70), COMSEC Pubs.

TECHNICAL MANUALS

TM 1-UH1-S C5, Jul UH-1A, B, C, D, H
TM 5-240, Jun Revised Maps
TM 5-315, Apr Fire Fighting
TM 5-530, Feb Materials Testing
TM 5-2805-209-20P, May Gas Eng
TM 5-3810-294-20, May 20-Ton Trk Mtd Cranes
TM 5-3895-330-10, May Spreader, Aggregate
TM 5-3895-330-24P, Jun Spreaders, Aggregate
TM 5-4610-210-14, Jun Water Purif Equip
TM 5-6115-271-20P, Jun 3-KW Gen Sets
TM 5-6115-332-20P, Jun 5-KW Gen Sets
TM 5-6115-365-15 C3, Jun Generators—Power Units
TM 5-6115-550-20P, Jun 150-KW & Up Gen Sets
TM 5-6115-573-23P, Jun .4-KW Gen Set
TM 5-6125-211-14, Jun 60 KW Motor Gen
TM 9-1400-380-ESC, Jun Pershing
TM 9-1410-500-12/1 C2, Jul Hawk
TM 9-1425-585-14/2, May Chaparral
TM 9-1427-380-12/2 C8, Jun Pershing
TM 9-2320-209-10 C7, May M44-Series 2½-Ton Truck
TM 9-2330-231-14P C3, Jul 1½-Ton Ammo Trailer M332
TM 9-2330-238-14, Jun M313 Expansible Van
TM 11-621-ESC, Jun AN/GRC-41 Radio Set
TM 11-5410-201-14P, Jun Elec Equip Shelter S-89C/G (AN/GRC-46 Radio TT Set)
TM 11-5810-232-ESC, Jun Electronic Key Gen TSEC/KG-27
TM 11-5820-590-12-1 C2, May AN/PRC-74 Radio Set
TM 11-5820-695-12, May AN/GRC-144 Radio Set
TM 11-6625-596-12, May Tel Test Set TS-716/U
TM 11-6625-1748-12, May Test Set, Radio AN/USM-306(V)1 (AN/GRC-106 Radio Set)
TM 11-6625-2376-15, Jun Sig Gen AN/USM-256
TM 11-6660-206-12, Jun Rawin Sets AN/GMD-1A & 1B
TM 55-409, May AF & RW
TM 55-1100-250-12-5, May CH-54A
TM 55-1500-219-ESC, Jun UH-1A, B, C, D, H
TM 55-1510-201-20P-2, Jun U-8
TM 55-1510-203-PMD C1, Jun U-6
TM 55-1510-203-PMP C1, Jun U-6
TM 55-1510-204-20P C1, Aug OV-1A, B, C, D
TM 55-1510-204-20PMD/1 C2, Jul OV-1D
TM 55-1510-204-20PMI C1, Jun OV-1A, B, C
TM 55-1510-204-20PMI/1 C2, Jul OV-1D
TM 55-1510-204-20PMP C1, Jun OV-1A, B, C
TM 55-1510-204-20PMP/1 C2, Jul OV-1D
TM 55-1510-204-20-1 C10, Jun OV-1A, B, C
TM 55-1510-204-20-1 C12, Jul OV-1A, B, C
TM 55-1510-204-20/1-1 C4, Jun OV-1D
TM 55-1510-204-20/1-1 C5, Jul OV-1D
TM 55-1510-205-20P C2, Aug U-1
TM 55-1510-205-PMI C1, Jun U-1
TM 55-1510-205-PMP C1, Jun U-1
TM 55-1510-209-10/1 & -10/4, Jun U-21
TM 55-1510-209-10/1 C1, Aug U-21
TM 55-1510-209-10/4 C1, Aug U-21
TM 55-1510-209-20P C2, Jul U-21
TM 55-1510-209-20-1, Jun U-21
TM 55-1510-209-20-2, Jun U-21
TM 55-1520-202-20 C16, Jul CH-34
TM 55-1520-209-20-2 C11, Jul CH-47A
TM 55-1520-210-20P-1 C1, Aug UH-1A, B, C, D, H
TM 55-1520-217-10/1 C8, Jun CH-54A

MODIFICATION WORK ORDERS

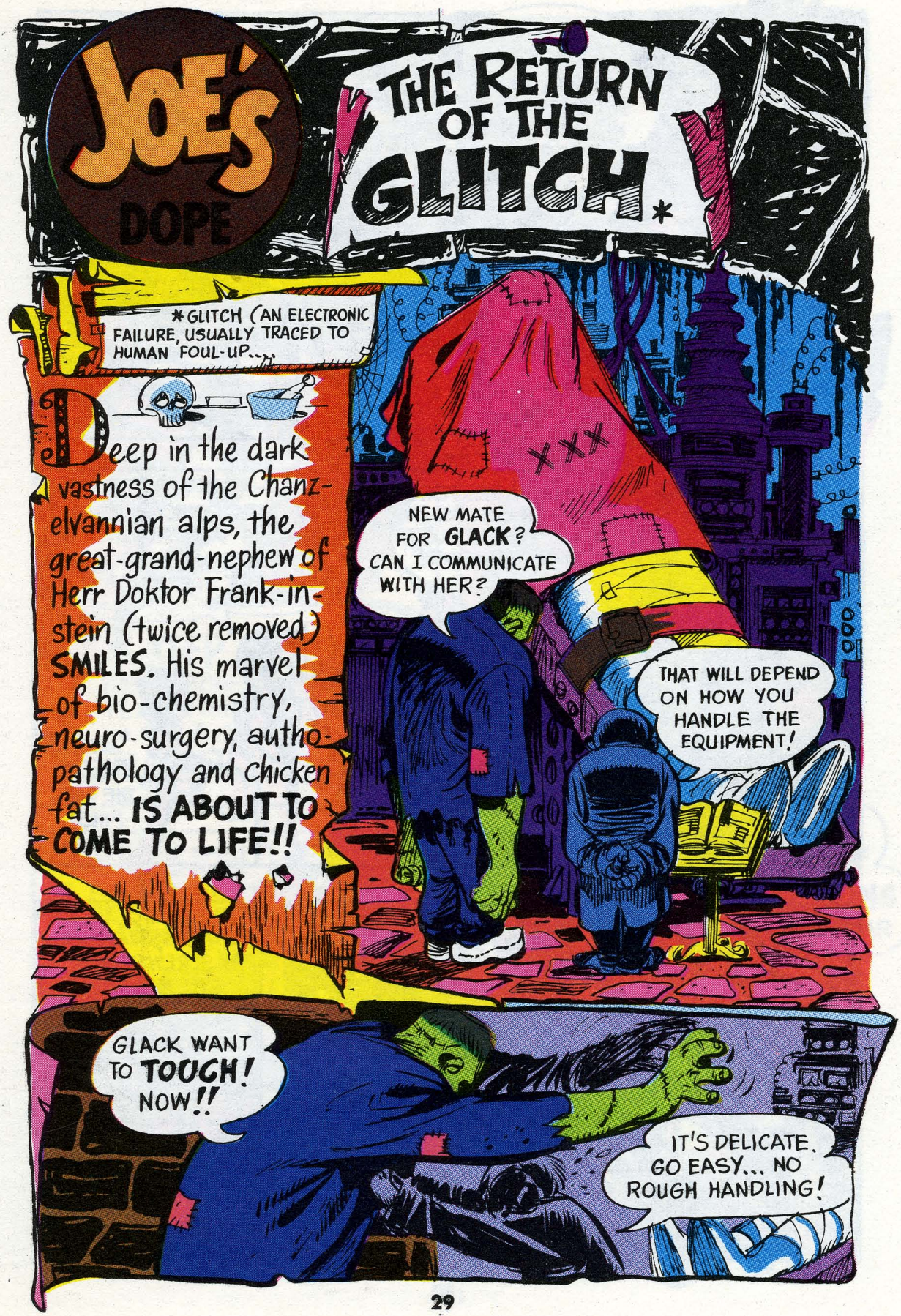
9-1240-287-30/1, Jul Sight Unit M53 Mod of Case, Sight Unit M166
9-1240-287-40/1, Jul Sight Unit M53
9-1425-500-30/3 C1 & -30/4 C1, Jun Hawk
9-2300-398-30, Jun Trucks, Semitrailers
9-2350-230-20/6, May Armd Recon/ Abn Aslt Veh: 152MM M551 Instal of Eng Exhaust Plume Diffuser
9-2350-230-20/7, Jun AR/AAV, M551
9-2350-230-30/6, Jul Armd Recon/ Aslt Veh 152MM M551
9-2350-230-30/7, Jul M551 152MM Armd Recon Abn Aslt Veh
9-4940-252-30/1/57, Jul Imp Nike-Herc
11-5800-207-30/2, Jul AN/TRC-90 & AN/TRC-129
11-5810-226-45/11, Jul Mod of Commo Security Equip TSEC/HY-2 and TSEC/HY-2A
55-1510-201-30/18, Jul Relocation of the Chip Detector from the Oil Filter Assy to the Oil Scavenge Pump Screen Assy (U-8)

MISCELLANEOUS

DA Cir 750-35, Jul Reporting Maint on Acft Subsystems
FM 31-71, Jun Northern Operations
LO 5-3655-211-12-2, Apr Gas Gen Equip
LO 5-3805-249-12-1 & -12-3, Apr Road Grader
SB 38-100, Jun Preservation, Packaging and Marking Materials
SB 700-20, May Army Adopted Reportable Items
TB 9-2300-295-15/9, Jul Warranty Procedures Commercial Design Vehicles
TB 55-1500-307-25 C6, Jul AF&RW
TB 55-1510-208-20/1, Aug AFW
TB 55-1520-228-20/5, Jul OH-58
TB 55-1615-253-30/1, Jul CH-54A&B
AR 710-2, (Aug) Material Management for Using Units, Support Units and Installations (supersedes AR 735-35).

MWO Of The MONTH

Got an M107 SP gun or an M110 SP howitzer? Ask your support to apply MWO 9-2300-216-30/32 (Dec 70) and worry no more about battery failure on your collimator. This MWO gives you an electrical source from the vehicle to the collimator. Your other equipment can be operated from this hook-up. Your DSU will get going on it soon as you shoot 'em a DA Form 2407.


JOE'S DOPE
THE RETURN OF THE GLITCH*
*GLITCH (AN ELECTRONIC FAILURE, USUALLY TRACED TO HUMAN FOUL-UP...
Deep in the dark vastness of the Chanz-elvannian alps, the great-grand-nephew of Herr Doktor Frank-in-stein (twice removed) SMILES. His marvel of bio-chemistry, neuro-surgery, autho-pathology and chicken fat... IS ABOUT TO COME TO LIFE!!
NEW MATE FOR GLACK? CAN I COMMUNICATE WITH HER?
THAT WILL DEPEND ON HOW YOU HANDLE THE EQUIPMENT!
GLACK WANT TO TOUCH! NOW!!
IT'S DELICATE. GO EASY... NO ROUGH HANDLING!

FIRST, GLACK, TRY KNOBS AND SWITCHES 'N' SEE HOW TO HANDLE HER.
SWITCHES AND AHEM KNOBS... NEVER FORCE 'EM!
YEAH... EASY... FORCING TEARS UP KNOBS 'N' SWITCHES 'N' BUSTS THINGS INSIDE!
ELECTRONIC EQUIPMENT IS DELICATE... NOW STAND BACK WHILE I EASE THE PLUG* IN.
*ALWAYS CHECK THE PLUG PINS!
ZAP
MOANNN!
SHE'S... ALIVE!!
QUICK, GLACK.. TH' SCREWDRIVER, WE MUST...

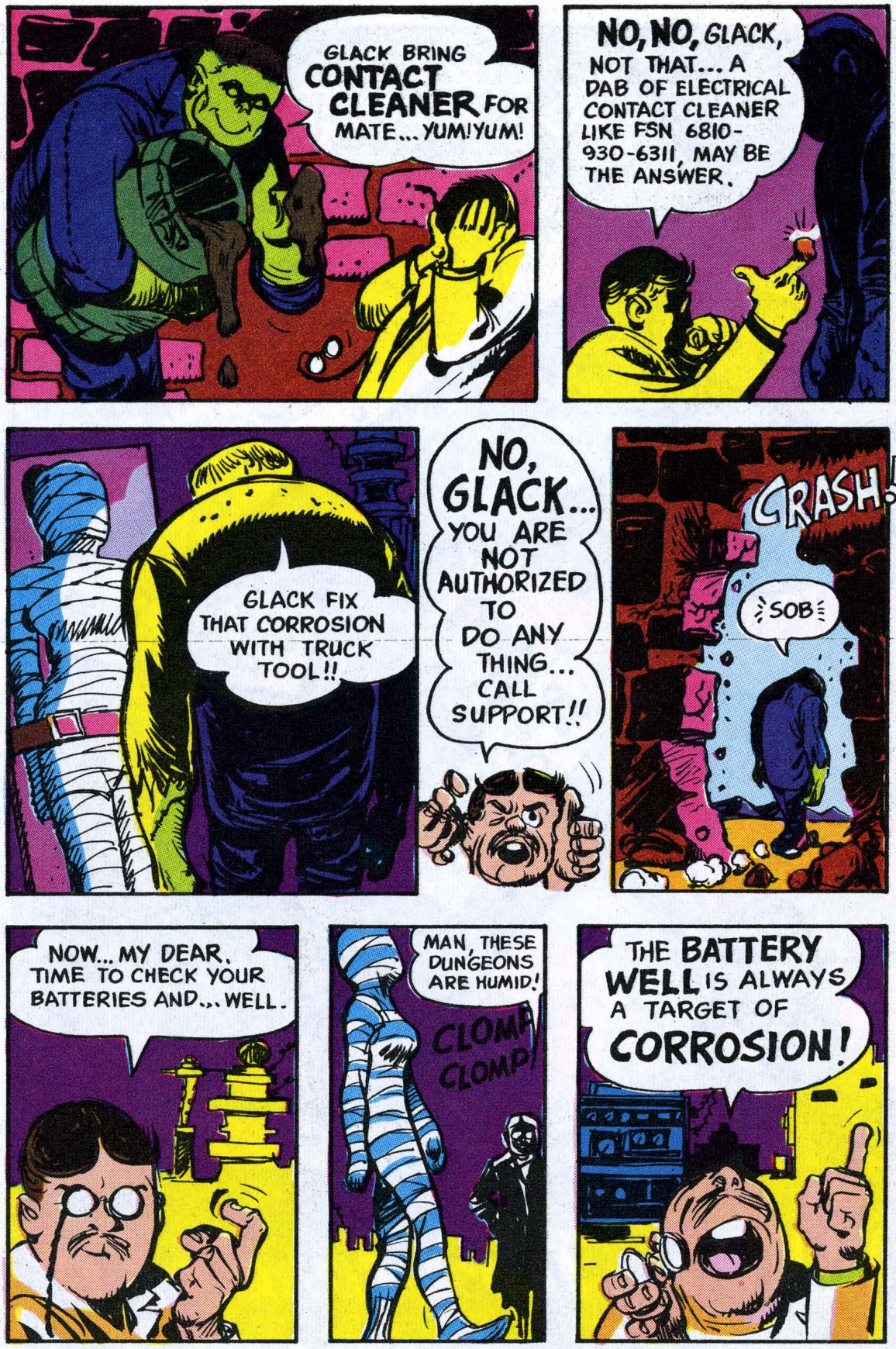
CHECK RETAINING SCREWS... IF LOOSE... TIGHTEN THEM!
BEFORE I INTRODUCE YOU TO HER... NOTICE THIS COVER PLATE!
KEEP IT CLOSED! THE SWITCHES ARE UNDER IT.. ANYTHING CAN SNAG ON A SWITCH.. SO WATCH IT!
GLACK WANTS MATE!!
TIGHTEN UP, DUDE! LET ME COVER THESE FIRST!
CORROSION IS A PROBLEM. MORE SO IN HOT HUMID AREAS.
CONTACTS, PINS AND CONNECTIONS NEED A REGULAR LOOK-SEE.

IF YOU WANT TO DISPLAY THIS CENTERPIECE ON YOUR BULL

IF YOU WANT TO DISPLAY THIS CENTERPIECE ON YOUR BULLETIN BOARD, OPEN STAPLES, LIFT IT OUT AND PIN IT UP.

UIPMENT ...*Take care of it*

LETIN BOARD, OPEN STAPLES, LIFT IT OUT AND PIN IT UP.


GLACK BRING CONTACT CLEANER FOR MATE... YUM! YUM!
NO, NO, GLACK, NOT THAT... A DAB OF ELECTRICAL CONTACT CLEANER LIKE FSN 6810-930-6311, MAY BE THE ANSWER.
GLACK FIX THAT CORROSION WITH TRUCK TOOL!!
NO, GLACK... YOU ARE NOT AUTHORIZED TO DO ANY THING... CALL SUPPORT!!
CRASH!
SOB
NOW... MY DEAR, TIME TO CHECK YOUR BATTERIES AND... WELL.
MAN, THESE DUNGEONS ARE HUMID!
CLOMP CLOMP
THE BATTERY WELL IS ALWAYS A TARGET OF CORROSION!

CHECK IT OFTEN!
THE HOTTER AND MORE HUMID THE AREA, THE MORE OFTEN YOU CHECK!
BATTERIES THAT ARE OUT OF SIGHT CONTINUE TO EAT AWAY...
LIKE THIS!
REMEMBER!
WHEN YOUR EQUIPMENT IS IDLE, TAKE OUT THE BATTERIES... ESPECIALLY DRY CELLS.
:ER: EXCUSE ME, M'DEAR.
TRANSPORTATION OF ELECTRONIC ITEMS IS ONE BIG CONTINUING HEADACHE.
SEEMS STUPID TO DO HUNDREDS OF DOLLARS WORTH OF DAMAGE TO ELECTRONIC ITEMS WHILE TRANSPORTING THEM TO THE LAB FOR A $10 REPAIR JOB.
SO.. CUSHION TH' LOAD.
:YAWN: I'LL FIX HER IN THE A.M.
GLACK! FIX HER EASY... SUPPORT FAR AWAY, TAKE TOO LONG.
HMM, GLACK NO LIKE THIS NOSE KNOB. GLACK FIX!

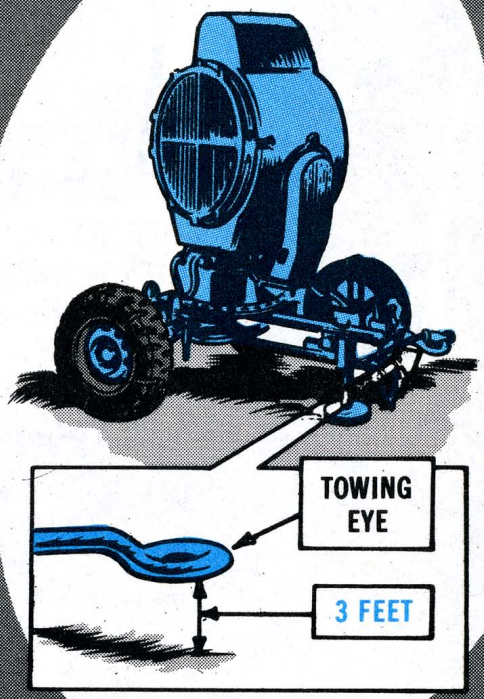
GOOD MORNING, WORLD! NOW.. DOWN TO THE LAB, AND THE REPAIR ON ELECTRONIQUE.
GLACK!
GLACK.. HMM... WHERE IS THAT HORRIBLE HULK?
Two hours later... Herr Dokter steps back and...
ALL DONE. NOW TO ACTIVATE HER.
AND...NOW... TO UNWIND TH' BANDAGES ON HER FACE... GLACK! COME HERE AND SEE...
AGHHHH
GLACK! CALL SUPPORT... NOW.
SOB RUINT! GLACK, YOU NEVER MAKE UNAUTHORIZED REPAIRS.
SOB SOB SOB SOB SOB
And so, in a fit of blinding rage... Herr Doktor was turned off... in fact, he turned off Glack, and he turned off Electronique, too... He then retreated to the depths of his abode, and by a flickering light, began to write a letter.
DEAR HALF-MAST, I HOPE MY AMAZING TALE WILL IN SOME SMALL WAY HELP YOU CURE THE ELECTRONIC HANGUP HOLDOVERS... ON PAGE THREE MY FIRST EXPERIMENT IS.....

MOVE RIGHT, SEARCHLIGHT

Handmoving the TVS-3 for any considerable distance is tricky and risky so never move it more than necessary.

But if you gotta—

1. At least 2 men should handle the move.
2. Before starting, rotate the MX-7999 searchlight about a ¼-turn in azimuth, so that the transformer is directly over the wheel axle of the V-416 trailer.
3. The towing eye of the V-416 shouldn't be raised more than 3 feet above ground level.



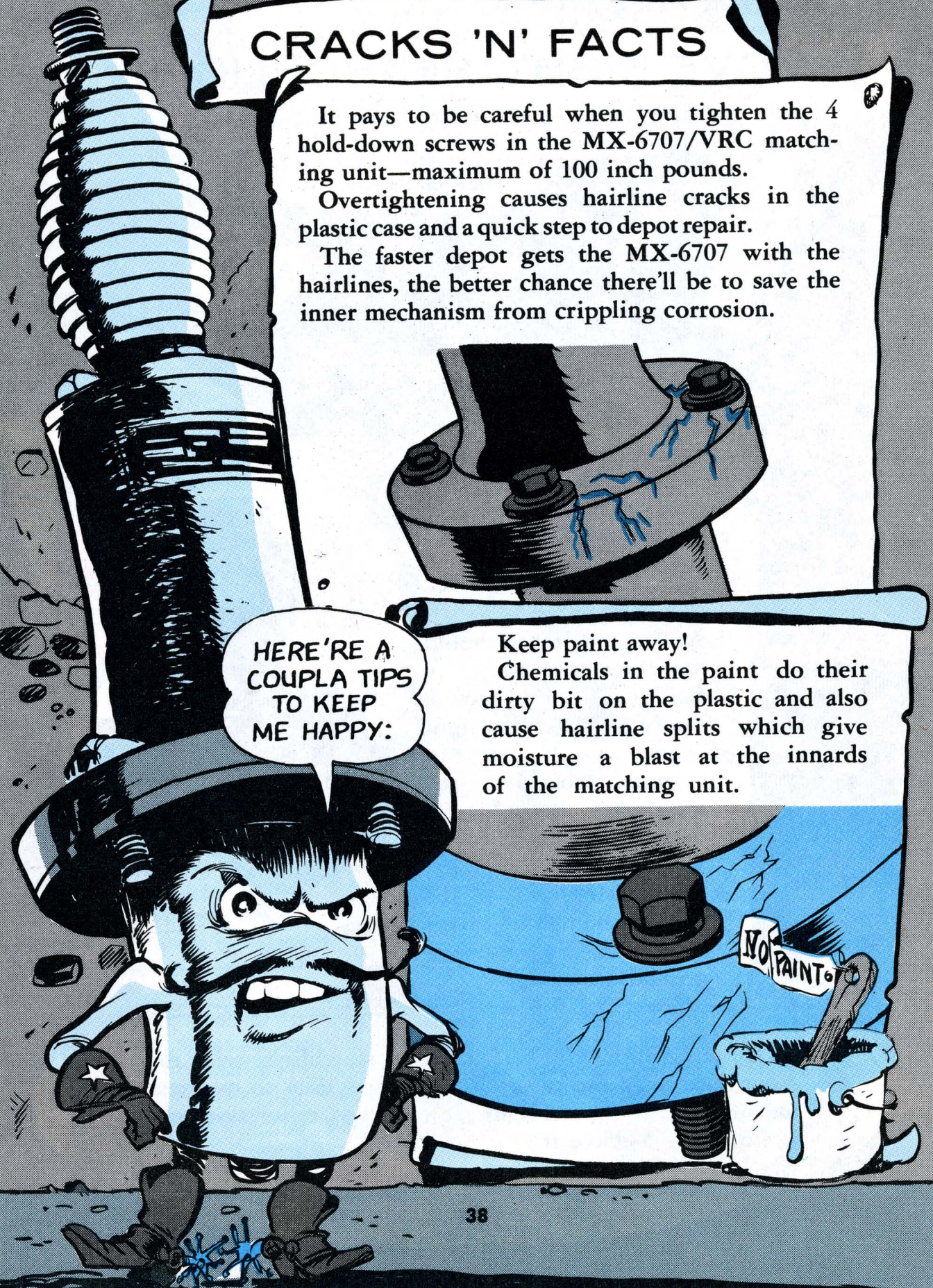
Operating your AN/TVS-3 xenon searchlight with the front door open can cause the cooling system to overheat and damage the searchlight. It can even cause skin and eye injury. So—close it.

CRACKS 'N' FACTS

It pays to be careful when you tighten the 4 hold-down screws in the MX-6707/VRC matching unit—maximum of 100 inch pounds.

Overtightening causes hairline cracks in the plastic case and a quick step to depot repair.

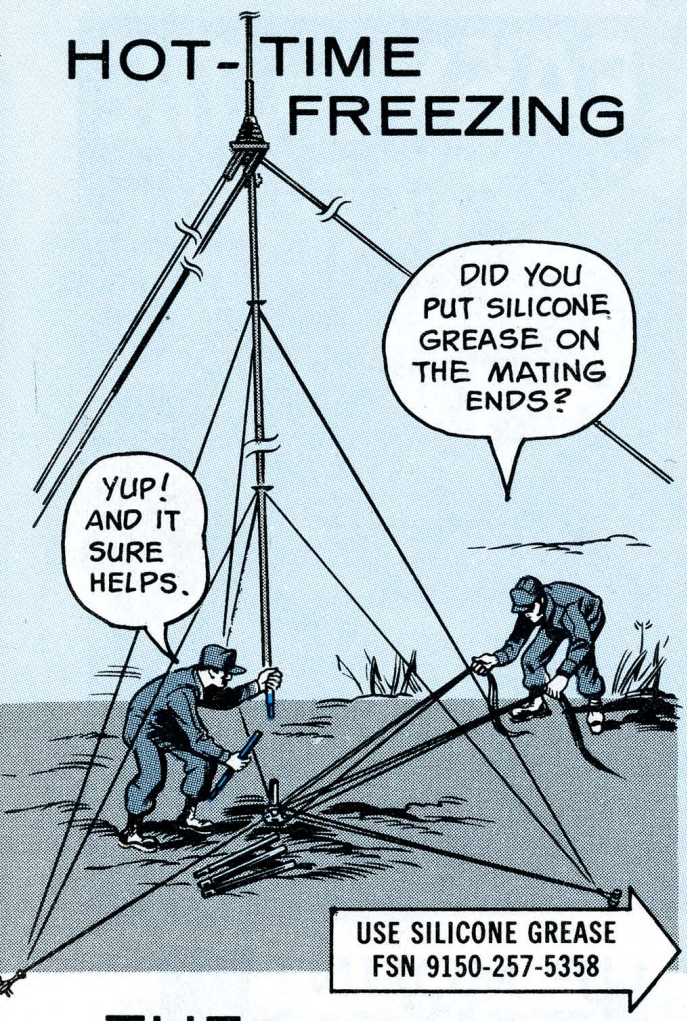
The faster depot gets the MX-6707 with the hairlines, the better chance there'll be to save the inner mechanism from crippling corrosion.



Keep paint away!

Chemicals in the paint do their dirty bit on the plastic and also cause hairline splits which give moisture a blast at the innards of the matching unit.

HOT-TIME FREEZING



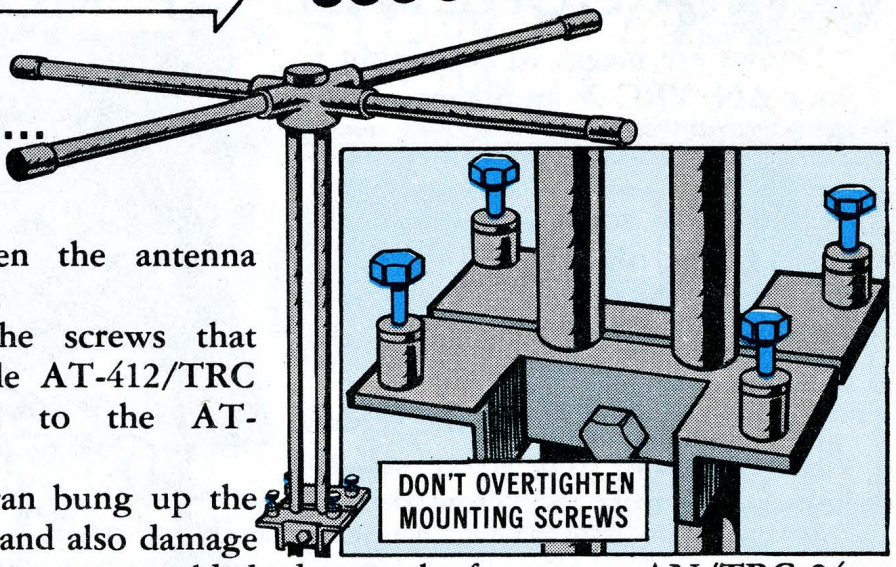
Mast sections AB-35/TRC-7 freezing together can give you fits when you disassemble the mast assembly ... especially in hot, humid climates.

Use silicone grease (FSN 9150-257-5358, 8-oz tube) on the mating ends of the AB-35 sections, all the way down to the section that fits into the AB-154/U mast base assembly.

This gives you a better shake in making the disassembly, and the silicone lubrication won't interfere with antenna performance on the RC-292 antenna equipment.

You'll find the word on page 19, TB 750-911-1 (Nov 70), Equipment Improvement Report and Maintenance Digest.

THE SCREWS... LIGHTLY



Never overtighten the antenna mounting screws!

Which ones? The screws that hold antenna dipole AT-412/TRC and AT-413/TRC to the AT-414/TRC reflector.

Too tight a fit can bung up the mounting screws—and also damage or loosen the mating nuts welded to the reflector.

The screws are not supply items, so support will have to improvise or local purchase to replace 'em. That means downtime, and that won't do much for your AN/TRC-24 radio terminal set.

And all you really want to do is snug the screws in just enough to stave off antenna wind movement.

If you're used to a free-turning kilohertz tuning knob on the RT-524 receiver-transmitter, s'alright.

But, some RT-524's are made with a built-in stop.

If you're never run into the fixed-stop variety ... man, you could go through the shaft gearbox pin the first time you turn a fixed-stop knob.

Which means: Easy on the turns.

The RT-246, push-button partner of the RT-524, has no tuning-knob worries. These are free-wheeling knobs.

A SCREWED-UP MOUNT

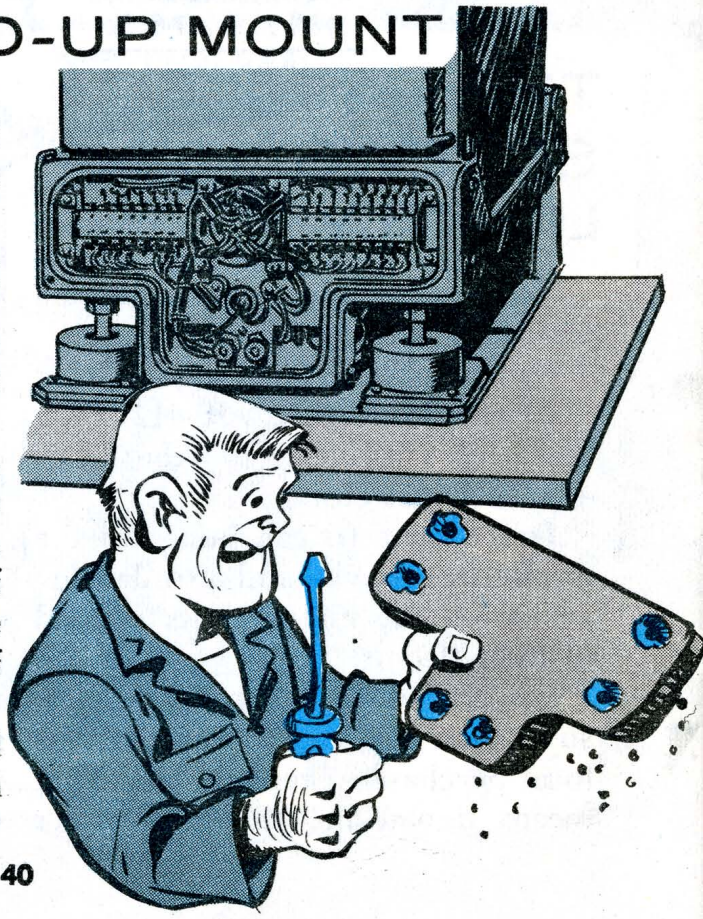
Screws are meant to hold tight in your AN/VRC-24 radio set—but if they hold on too tight, that's trouble.

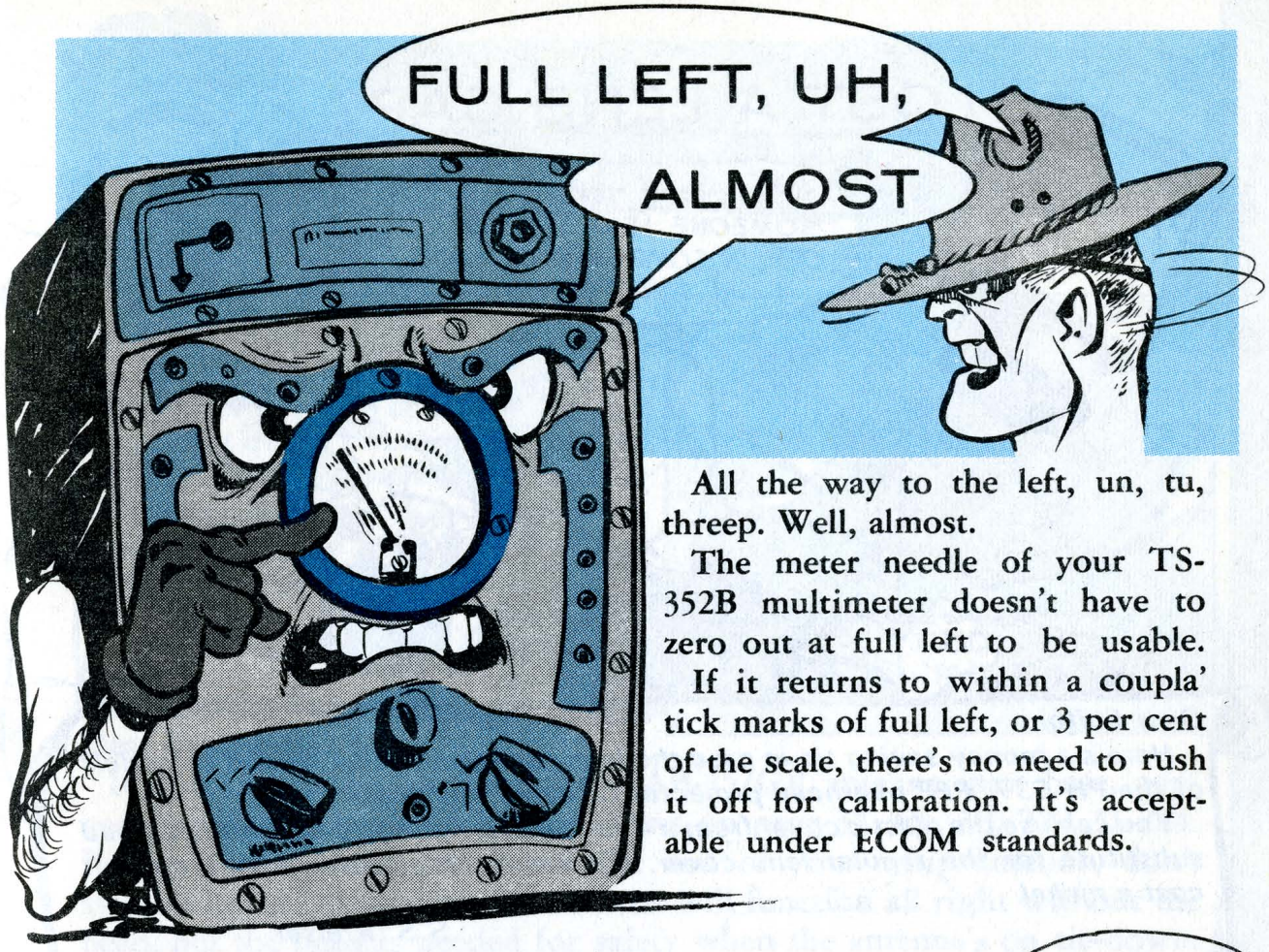
Like the 6 screws that hold the back panel of the MT-1436A/U used with the RT-323. The screw-hole heli-coils are hard metal that hang on hard.

So, when you remove the screws, you're liable to drag slivers off the heli-coil or burr the screw threads.

If you're getting this kind of hang-on, **stop** everything! Dose the screw holes with a few drops of penetrating oil.

This oughta smooth the way and head off most of the damage from a too-tight screw.



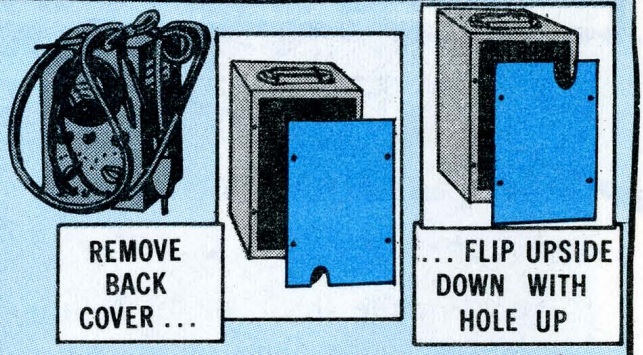


All the way to the left, un, tu, threep. Well, almost.

The meter needle of your TS-352B multimeter doesn't have to zero out at full left to be usable.

If it returns to within a coupla' tick marks of full left, or 3 per cent of the scale, there's no need to rush it off for calibration. It's acceptable under ECOM standards.

Woudja' believe it? Some troops would sacrifice a $30 vacuum tube, and more, to save 2 minutes work in getting a piece of commo equipment ready for transit.



THE POINT: if you don't stow the leads of the ME-26B/U multimeter below the back compartment cover, it's almost a sure bet you'll bash the AC probe and ruin the tube inside it . . . or you'll snag and break the other leads.

So, whether you're sending the meter off to the shop, or wherever, stow the leads. Put 'em through the handle at the top of the meter, stow 'em in the compartment, and reverse the back cover so that the opening is at the top. That lets you feed all the cords in . . . and still be able to screw the cover back on.

LOST A LENS CAP?

Dear Editor,

Here's a money-saving tip in case the lens cover on your A, B and C models of the PH-637/PFP overhead projector turns up missing.

You can use the plastic cover from a 4-in diameter coffee can. This is a good substitute for the regular lens cover, it's easily obtainable, and it doesn't cost a nickel.

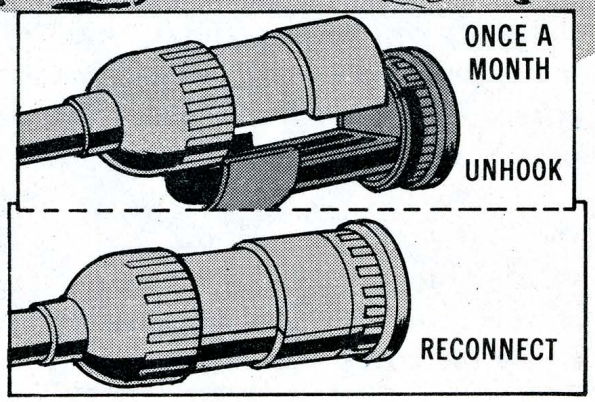
S.S. Kreiser
Indiantown Gap Pa.

(Ed Note—You're right as rain, and the Electronics Command says the lid is an acceptable substitute for the cover.)

A FREEZING CONNECTION

At 90 in the shade or 10 below ... the connector plugs on your 26-pair CX-4566A/G and CX-4760A/G telephone cable assemblies can freeze tight.

To stave off the bind, unhook and reconnect the U-185/G, U-186/G, and U-187/G connector plugs at least once a month.

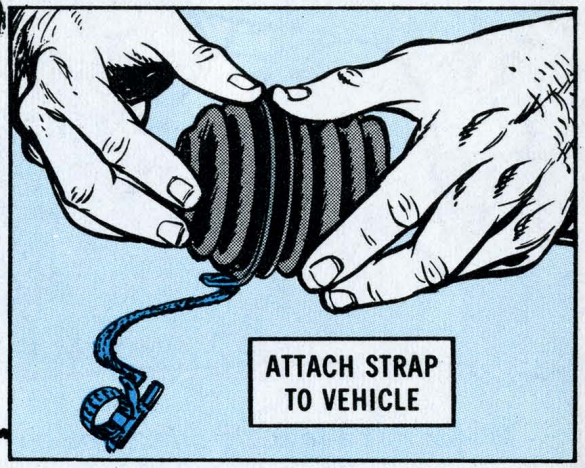


GROUND STRAP TIE?

Dear Half-Mast,

I've been told the ground strap on the antenna system of the AN/GRC-3 radio set doesn't have to be secured to the vehicle. I've also heard that it does. What's the answer? Also, will the antenna work right with the bead missing?

MSG D. J.
Ft Bragg, NC



Dear Sergeant D. J.,

It does. So, when you install the AB-15/GR antenna mast base, connect the ground strap the way it shows on page 37, fig. 30, TM 11-284. If ever you lose the "bead" off the end of your whip antenna, don't sweat it but do replace it. The antenna will function all right without the bead, but the bead is needed for safety when the antenna's on tie-down.

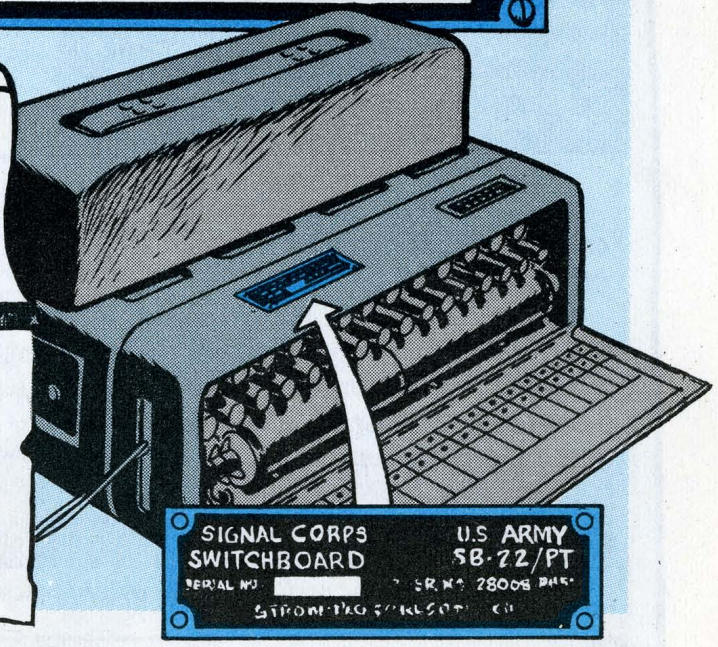
Half-Mast

DATA PLATE PALAVER

Dear Half-Mast,

How do I get a data plate for my SB-22/PT switchboard now that SB-11-263 has been rescinded?

SP6 G.K.



Dear Specialist G. K.,

Ask your support to get one using FSN 5805-639-1679, listed on page 6 of TM 11-5805-262-35P (Jan 65).

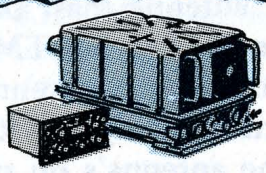
Half-Mast

FLOAT ITEMS AND ...

AVIONICS

Dear Half-Mast,

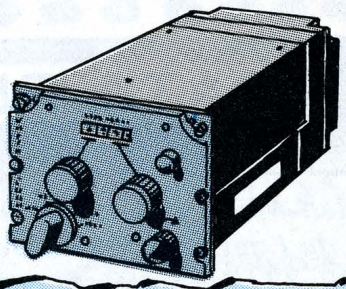
We've got a few big questions on records like DA Form 2408-7 and -8 for avionics items installed in or removed from aircraft.



Some items like the AN/ARC-51BX don't have a serial number but include a component (RT-742/ARC-51BX) which does.

Q—What number must be used if a reportable system doesn't have a serial number but a major component does?

Under AR 750-19 (Apr 70) operational readiness float procedures, one AN/ARC-114 (or 115 or 116) is exchanged for another when the one that's removed needs repairs.



Q—Can the -7 and -8 for the AN/ARC-114 be eliminated since the aircraft is a system with its own -7 and -8, using the rule in para 4-21f(1) of TM 38-750 as a guide?

Q—If the answer to the above question is no, can a -7 and -8 for the ARC-114 be kept in the aircraft log without an identifying serial number so that new forms won't be needed when an ARC-114 is exchanged for another in a readiness float transaction?

In many operational readiness float transactions, one component of the communications end item or system is substituted for another in a DX swap.

Q—What log record is made of this component DX?

CW2 D.E.W.

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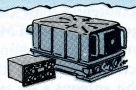

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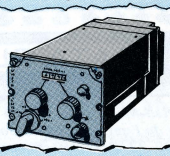

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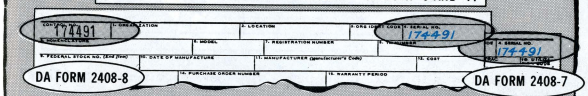
Dear Mr. D.E.W.,

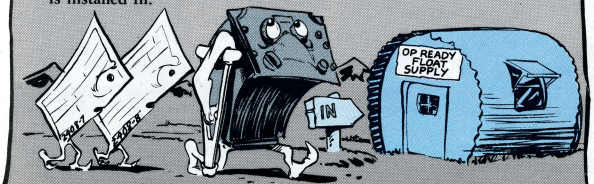
The serial-number rule in para 4-9c(4) of TM 38-750 applies to systems as well as other items. If the reportable system doesn't have a serial number, use the preprinted control number from the system's initial DA Form 2408-8 as a serial number. Never substitute the serial number from a component.

WHEN THE ITEM OR SYSTEM HAS NO DATA PLATE SERIAL NUMBER, THE -8 CONTROL NUMBER GOES IN BLOCK 4—ON BOTH -8 AND -7.



On your second question, the answer is no, the -7 and -8 for the ARC-114 may not be eliminated. Para 4-21f(2) applies. Para 4-21f(1) applies only to components of commo/electronics items or systems.

On your third question, again the answer is no. Those forms go with the float item—to float stock or to the next aircraft the item is installed in.



PS MORE

RECORDS

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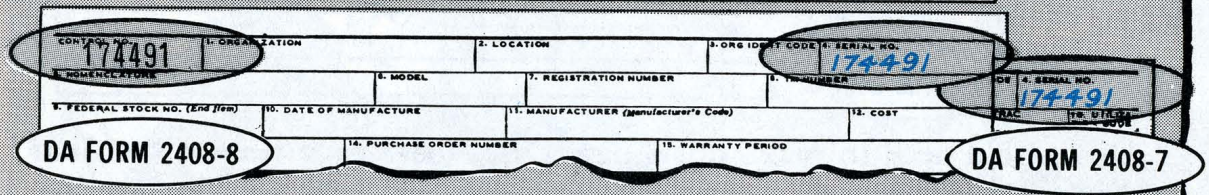

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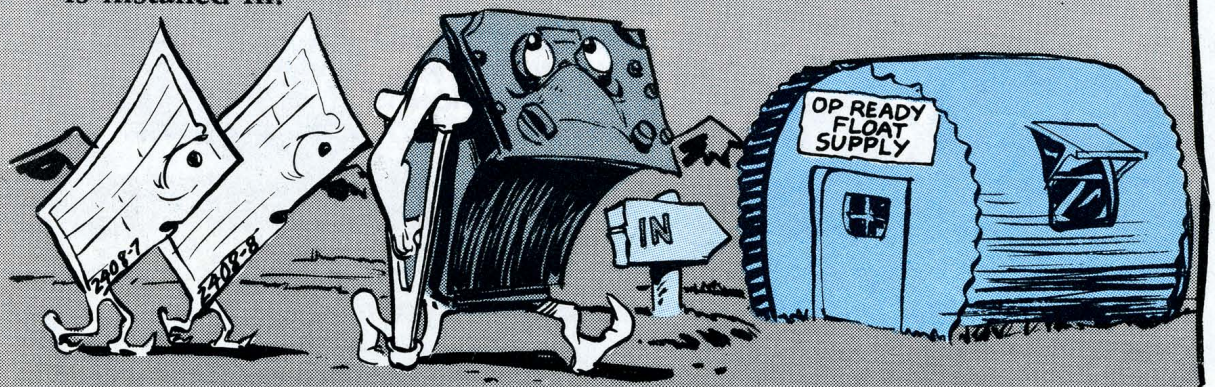
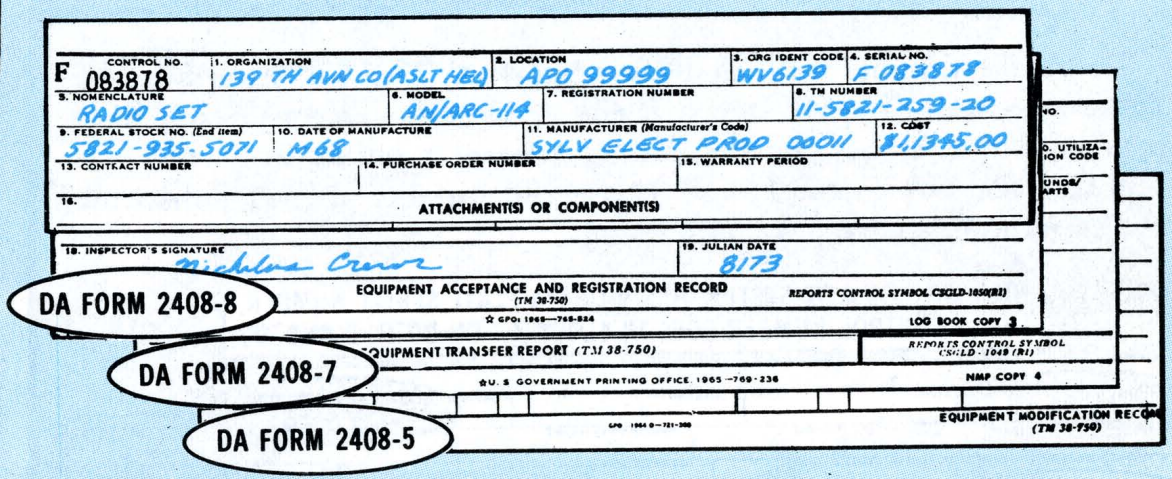
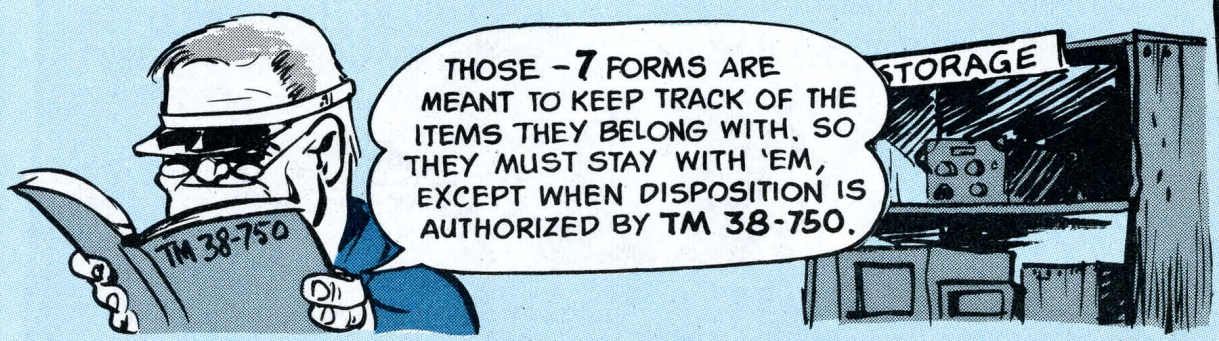


PS MORE

And the -7 and -8 must be identified by the specific item's serial number (either from its data plate or from its initial DA 2408-8).

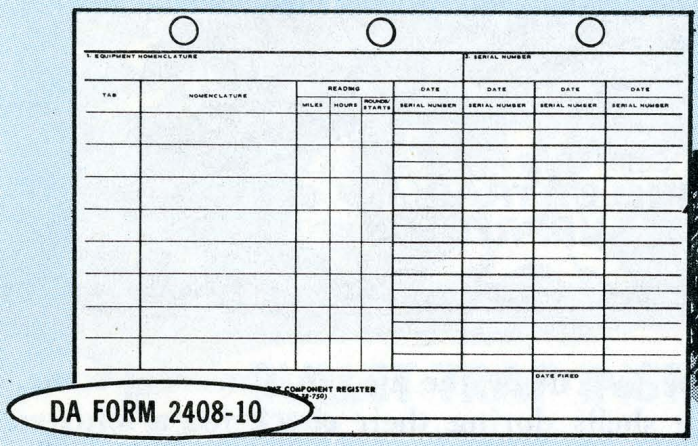


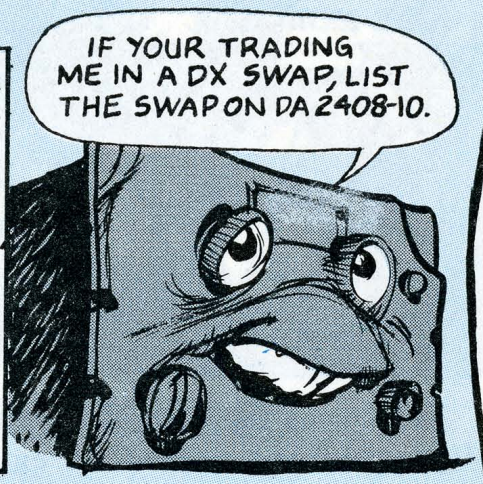
Also, you'd need to make out a new DA 2408-7 each time **if the float exchange is a property-book transfer.** No new-7 would be needed, tho, if the item stays on the same unit's property-book—even if it's installed on a **different** aircraft. In that case you'd keep the old-7, but keep it with the item along with any other log forms it may have.



As for those component DX swaps, the best way to handle 'em is to record 'em on DA 2408-10. If the end item or system doesn't have a DA 2408-10 (as a requirement in para 4-21k), your CO still can set 1 up as

spelled out in paras 1-7c and 4-21a. Details on component swaps of this type—including dates and serial numbers—may be needed to keep track of your float stocks.

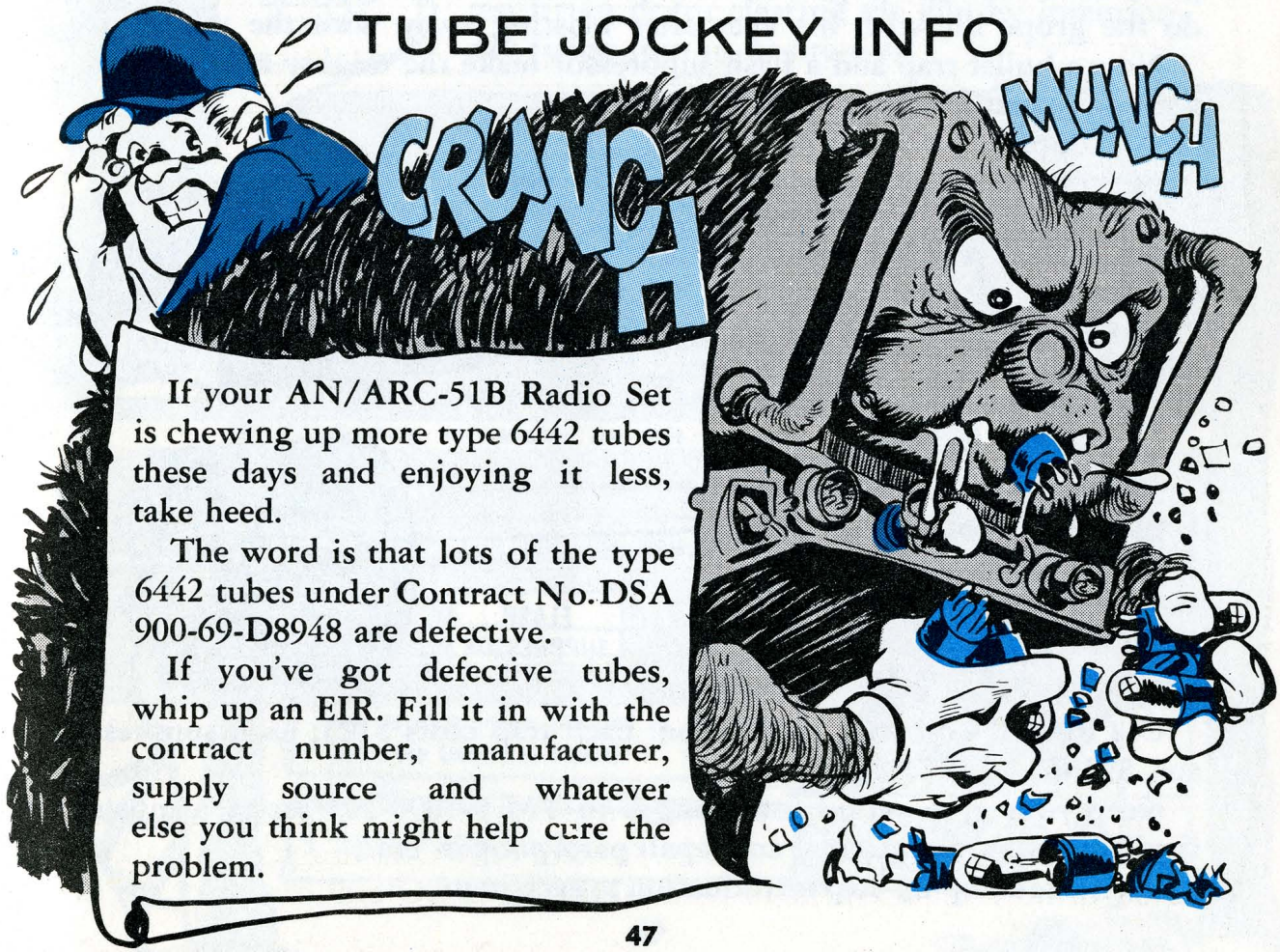




(Another possible solution could be use of a component change listing on DA 2408-16 as now authorized for aircraft "condition change" items.)

Half-Mast

TUBE JOCKEY INFO



If your AN/ARC-51B Radio Set is chewing up more type 6442 tubes these days and enjoying it less, take heed.

The word is that lots of the type 6442 tubes under Contract No. DSA 900-69-D8948 are defective.

If you've got defective tubes, whip up an EIR. Fill it in with the contract number, manufacturer, supply source and whatever else you think might help cure the problem.

M134 SAFETY

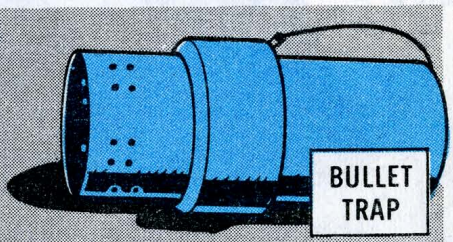
Ever since the M134 machine gun made the aircraft armament scene, 45J types have walked on egg shells during their check for a leftover round in the gun, and ...

Brave knaves have suffered temporary light blindness when firing the minigun during nighttime ops.

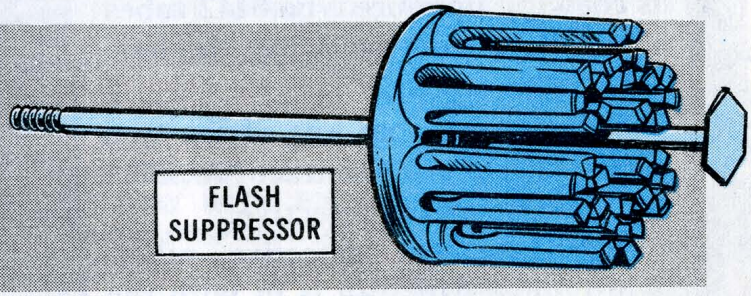
F'rinstance, when a 45-Juliet pulled a weapon-clear check and accidentally turned the barrel cluster when removing the safing sector, he got a hairbristling, uptight, bullet copout. And a whirly stick rider had to do the grope bit with his eyes after blasting away with the minigun.

Now a bullet trap and a flash suppressor make the mighty mini a safer weapon to maintain and operate. Both items are in supply.

You're allowed 2 bullet traps, FSN 4933-254-6346, for every 3 choppers equipped with the minigun used with XM28/28E1, XM18E1 (M18A1), M21, and XM27/27E1 subsystems.



You can get 1 flash suppressor, FSN 1005-253-5885, for each armament subsystem installed and in use.



Use RIC B14 on your requisition. Each trap costs $125; each suppressor, $93.67.

Keep your eyes peeled for changes to TM 9-1090-203 series manuals that'll have this maintenance and repair parts poop in 'em.

Let's take a step-by-step introduction to each item.

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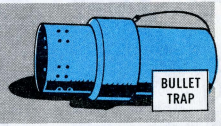

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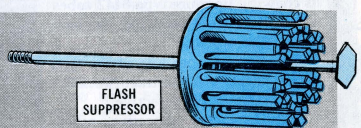

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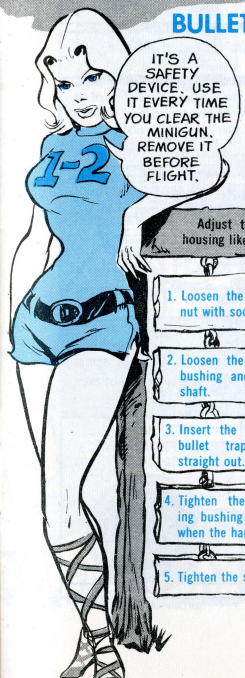
BULLET TRAP INSTALLATION

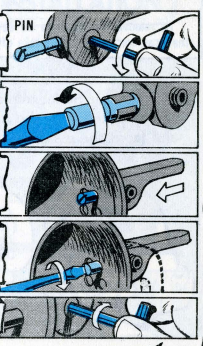


'Course, all armament subsystems and bird electrical power switches and circuit breakers should be in the OFF position. Make sure none of your buddies are standing, walking, or funning in front of the gun.

Hold one, Podner. This bullet trap is not for test firing or for clearing the gun by intentionally firing into it, nosire-e-e!

Adjust the quick release pins for a tight fit in the bullet trap housing like so—

1. Loosen the set screw in the cylinder nut with socket head key wrench.
2. Loosen the shaft until the expanding bushing and washer are free on the shaft.
3. Insert the pin into the hole in the bullet trap with handle sticking straight out.
4. Tighten the shaft until the expanding bushing locks the pin in the hole when the handle is locked.
5. Tighten the set screw.



PS MORE

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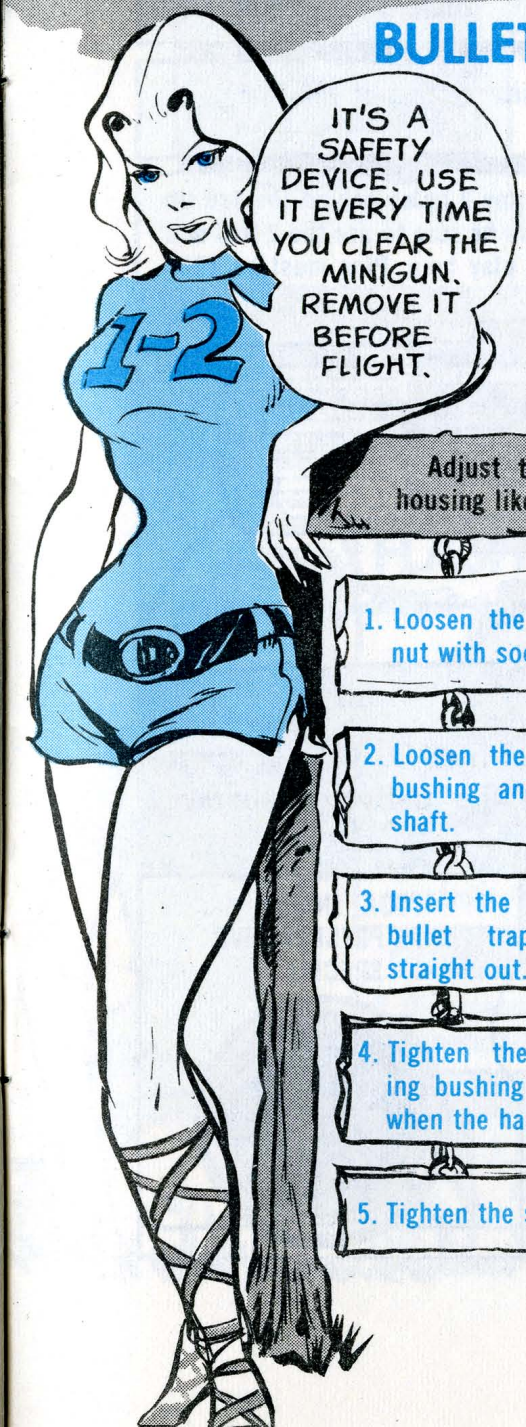

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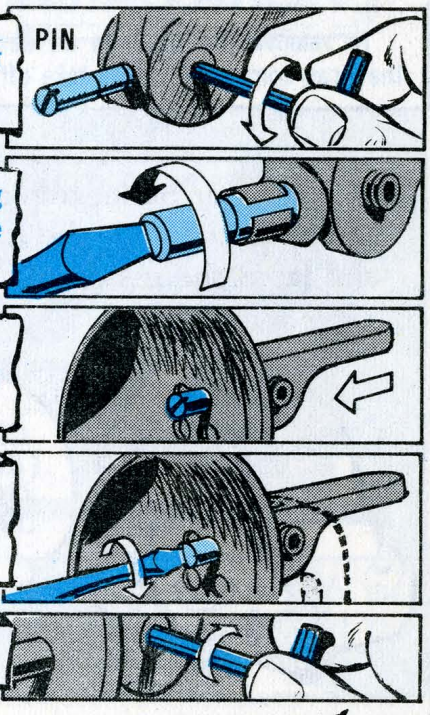
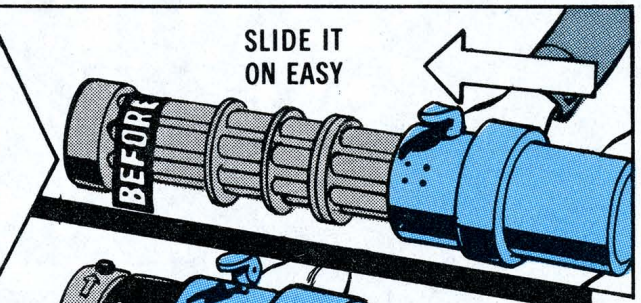
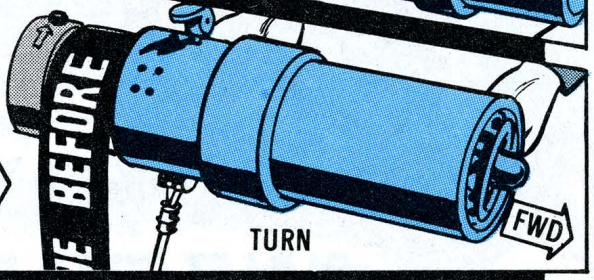


PS MORE

6. Stand to the side or rear of your minigun. Slide the bullet trap assembly—e-a-s-y like—over the barrel cluster until it touches the deflector face in the housing.

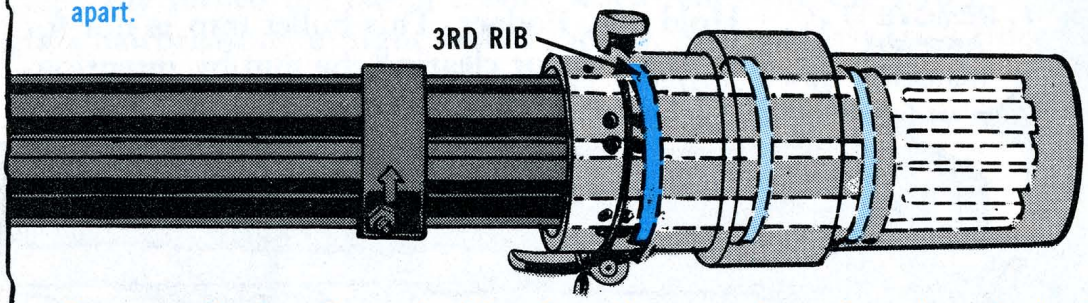


7. Rotate the trap clockwise until the barrels seat within the recessed area of the deflector in the housing assembly.



Note: Always rotate the bullet trap in the direction opposite to that of gun firing rotation.

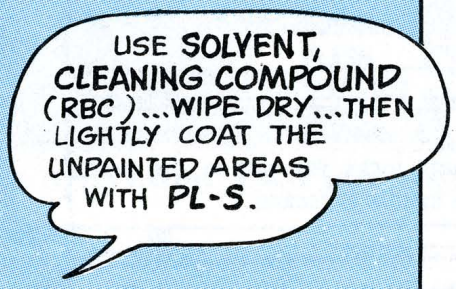
8. Put the bullet trap harness assembly quick release pins into any 2 holes behind the 3rd rib of the M134 gun barrel clamp assembly. Holes are staggered so be sure to use the 2 that will give the bullet trap the tightest fit. You want mini-mini end play here. Pins must be 180° apart.

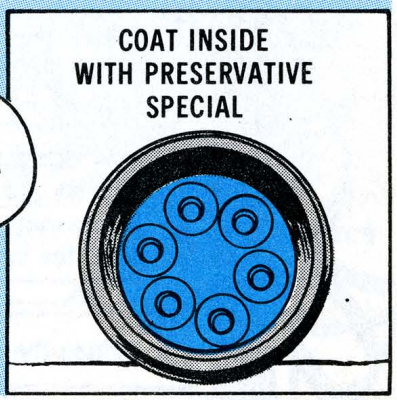


To remove the trap, do an about-face from above procedures. Remember, six-shooters, that trap comes off before take off!

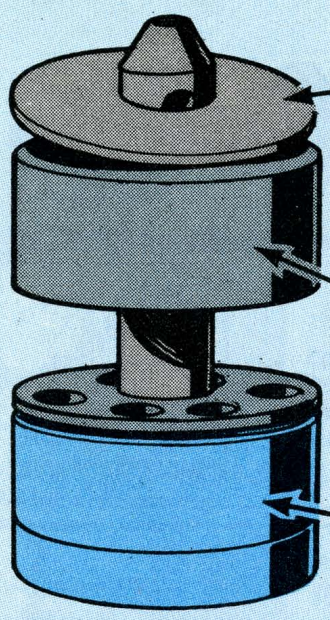
CLEANING

Clean your bullet trap after any round is fired into it. Take it apart and chip or scrape the round fragments from the deflector surface and from the inside of the housing.





INSPECTION



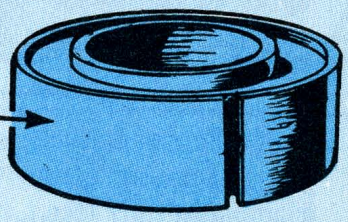
Check aluminum pad for deformation or breakup.

Inspect the deflector for cracks.

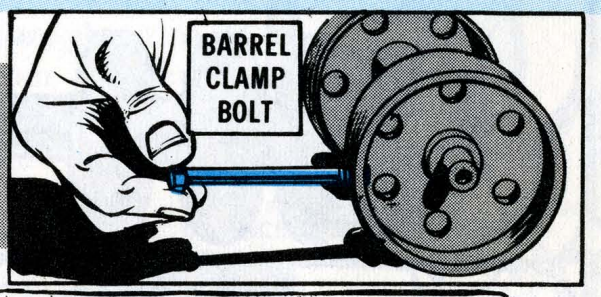
TIP: If light can be seen through a bullet hole in the rubber insert, replace insert with FSN 4933-254-6344.

Several rounds may pass through the same hole in the insert before it's necessary to replace it.

Give the rubber insert a long eyeball treatment to see if fragments could pass back into the minigun barrels.



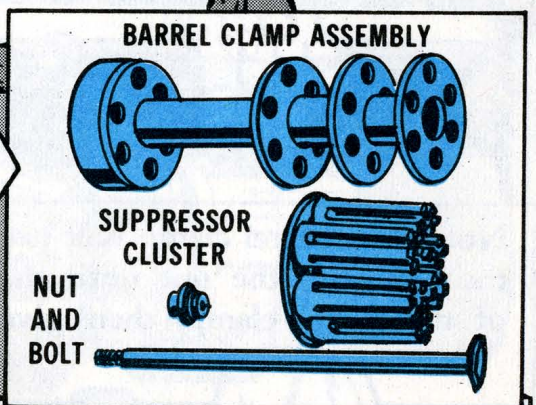
Inspect the minigun. The barrel clamp bolt gets special attention. Look for damage if gun was fired with trap installed.



FLASH SUPPRESSOR INSTALLATION

1. Remove the barrel clamp assembly from the minigun.

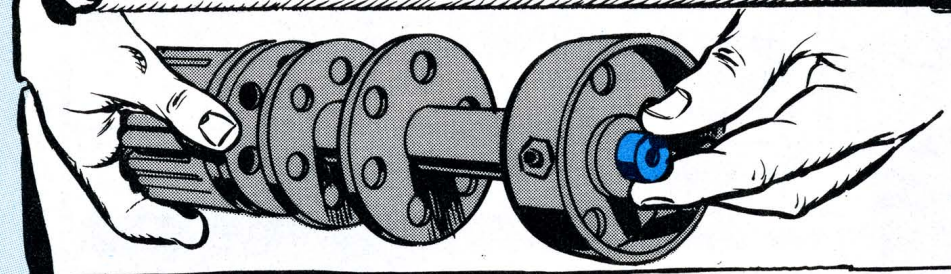
2. Disassemble the flash suppressor.



3. After inserting the flash suppressor bolt through the suppressor cluster and barrel clamp assembly, start the suppressor nut on the bolt.

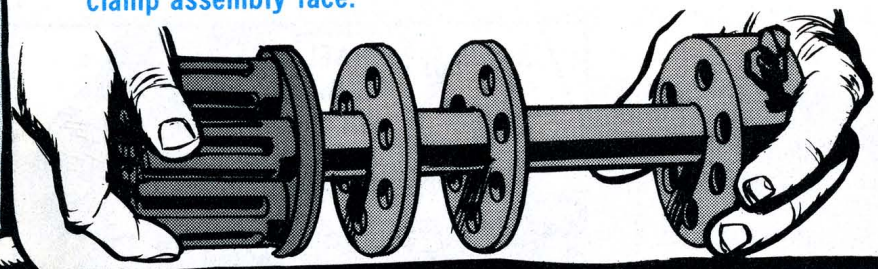
PS MORE

4. Aline the nut hole with the barrel clamp hole.

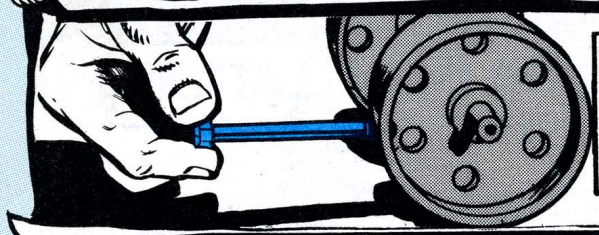


Insert clamp bolt and tighten just enough to hold the flash suppressor nut.

5. Hold the suppressor bolt against the cluster. Turn the suppressor cluster until it contacts the barrel clamp assembly face.

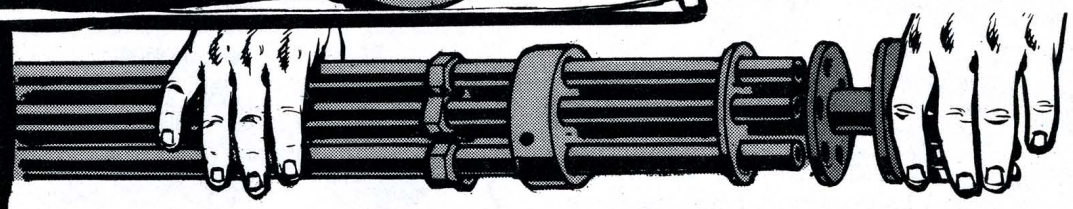


6. Tighten the suppressor cluster. Line it up with the holes in barrel clamp assembly. Turn cluster one hole after it touches the barrel clamp face.

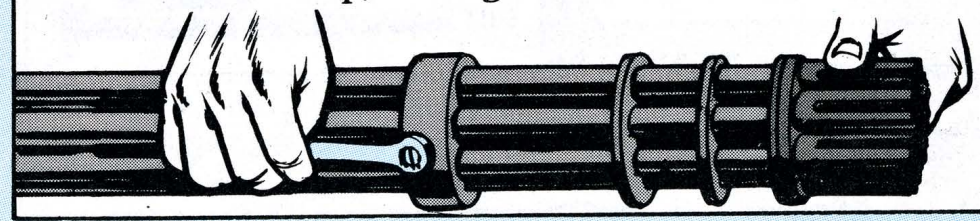


Remove barrel clamp bolt.

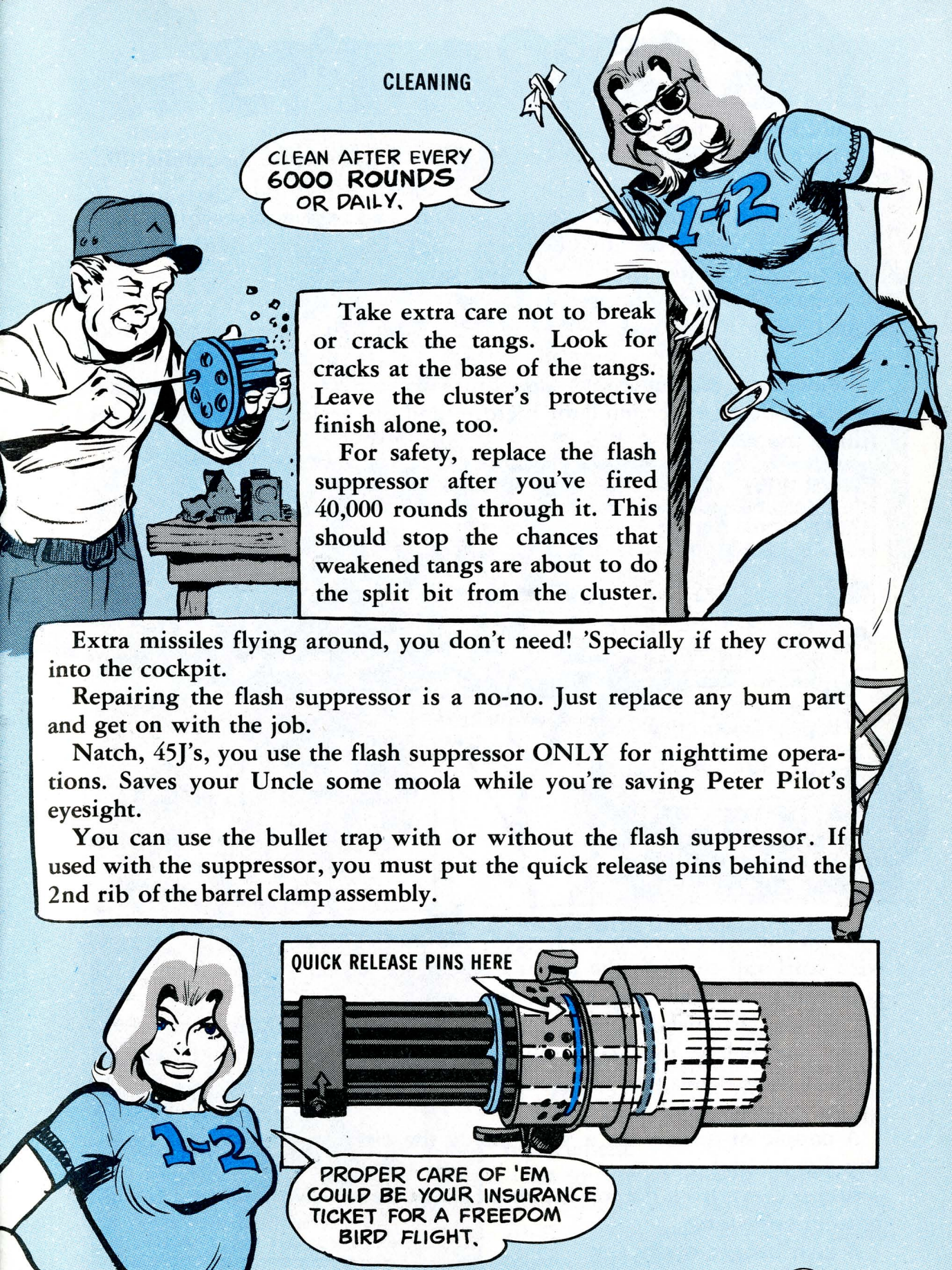
Install assembly with suppressor on minigun.



Note: The barrel clamp bolt needs special tightening attention. Turn the bolt into the nut until the head contacts the exterior surface of the barrel clamp, then give it one more half-turn. No more!



CLEANING



Take extra care not to break or crack the tangs. Look for cracks at the base of the tangs. Leave the cluster's protective finish alone, too.

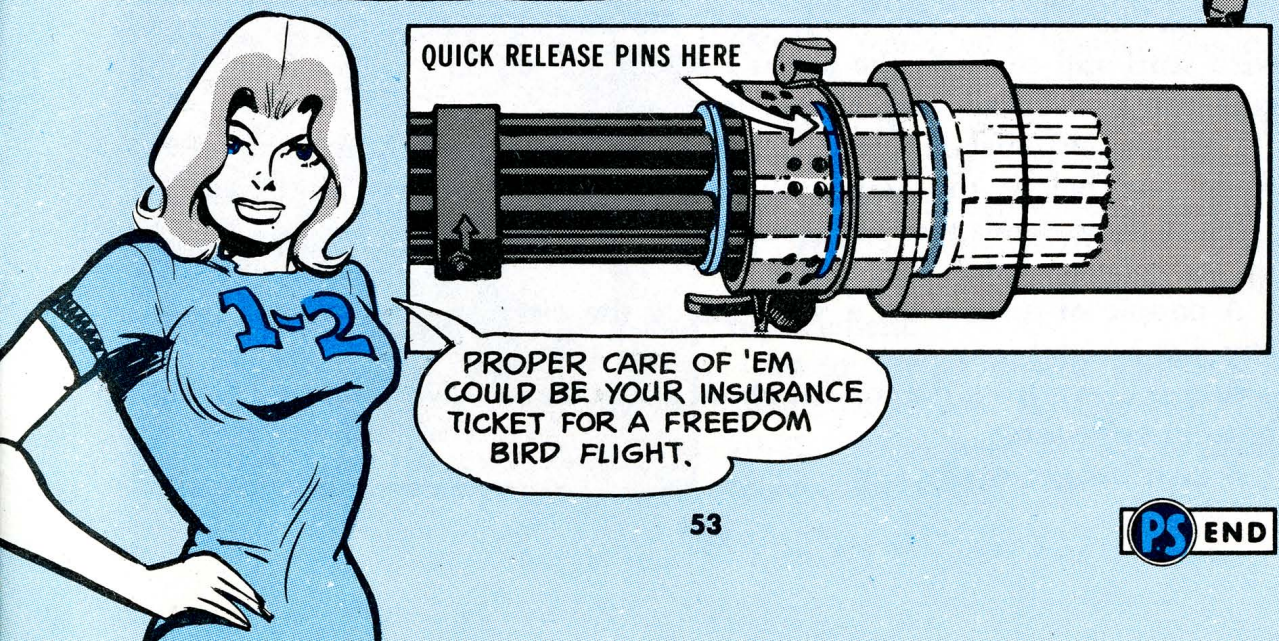
For safety, replace the flash suppressor after you've fired 40,000 rounds through it. This should stop the chances that weakened tangs are about to do the split bit from the cluster.

Extra missiles flying around, you don't need! 'Specially if they crowd into the cockpit.

Repairing the flash suppressor is a no-no. Just replace any bum part and get on with the job.

Natch, 45J's, you use the flash suppressor ONLY for nighttime operations. Saves your Uncle some moola while you're saving Peter Pilot's eyesight.

You can use the bullet trap with or without the flash suppressor. If used with the suppressor, you must put the quick release pins behind the 2nd rib of the barrel clamp assembly.



PS END

COBRA TIPS

Full, but not over-ful.

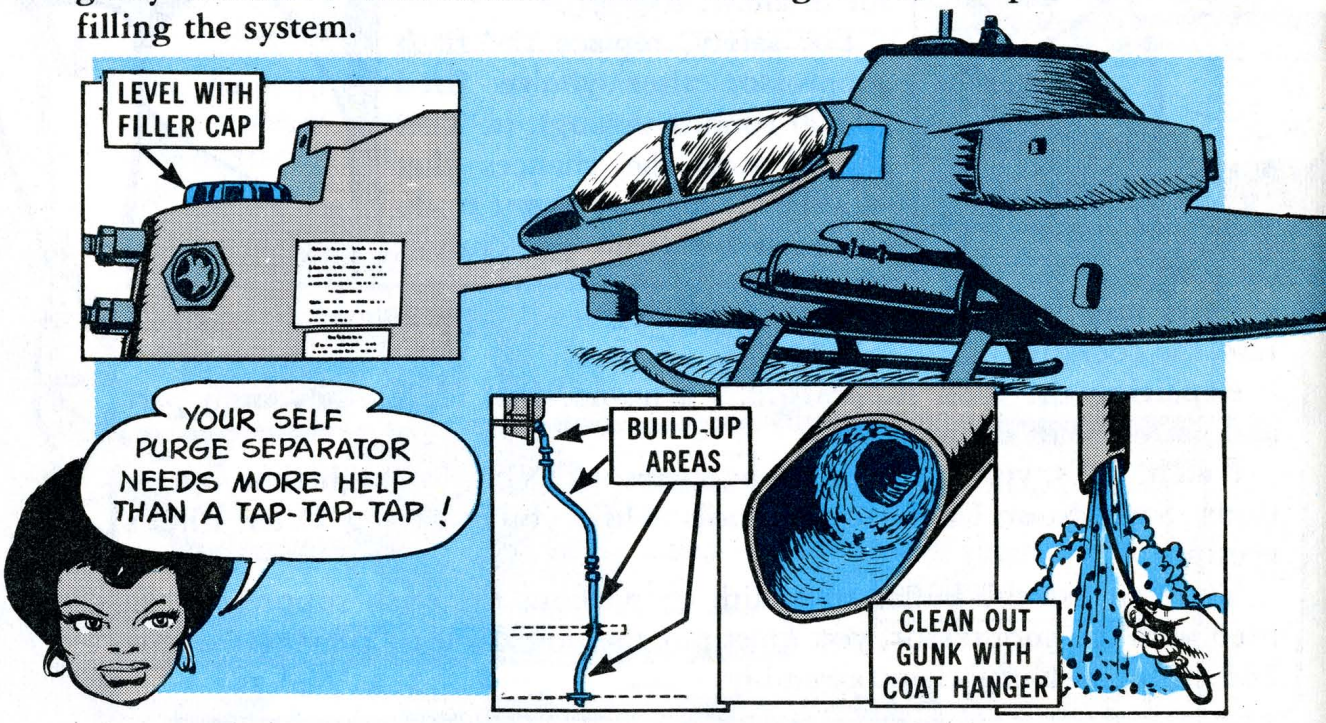
That's the way you Cobramechs want to keep the hydraulic fluid reservoirs on your baby.

When the pilot makes a steep on-target pass, a low reservoir will allow air to enter the hydraulic pump inlet causing fluid foaming, which results in loss of hydraulic pressure.

No pump damage—no need to change it.

Just keep the MIL-L-5606 red juice level with the reservoir filler cap.

Remember, tho, hydraulic pressure must be released from the emergency collective accumulator before adding fluid, to prevent overfilling the system.



When the ejector tube is clogged, the particle separator gets jammed with stuff and can't do the job it's advertised to do. Some of the gunk gets into the engine—and there she blows!

You see, Wirebenders, the ejector tube bends around airframe structures just below the separator and again just above its exit spot.

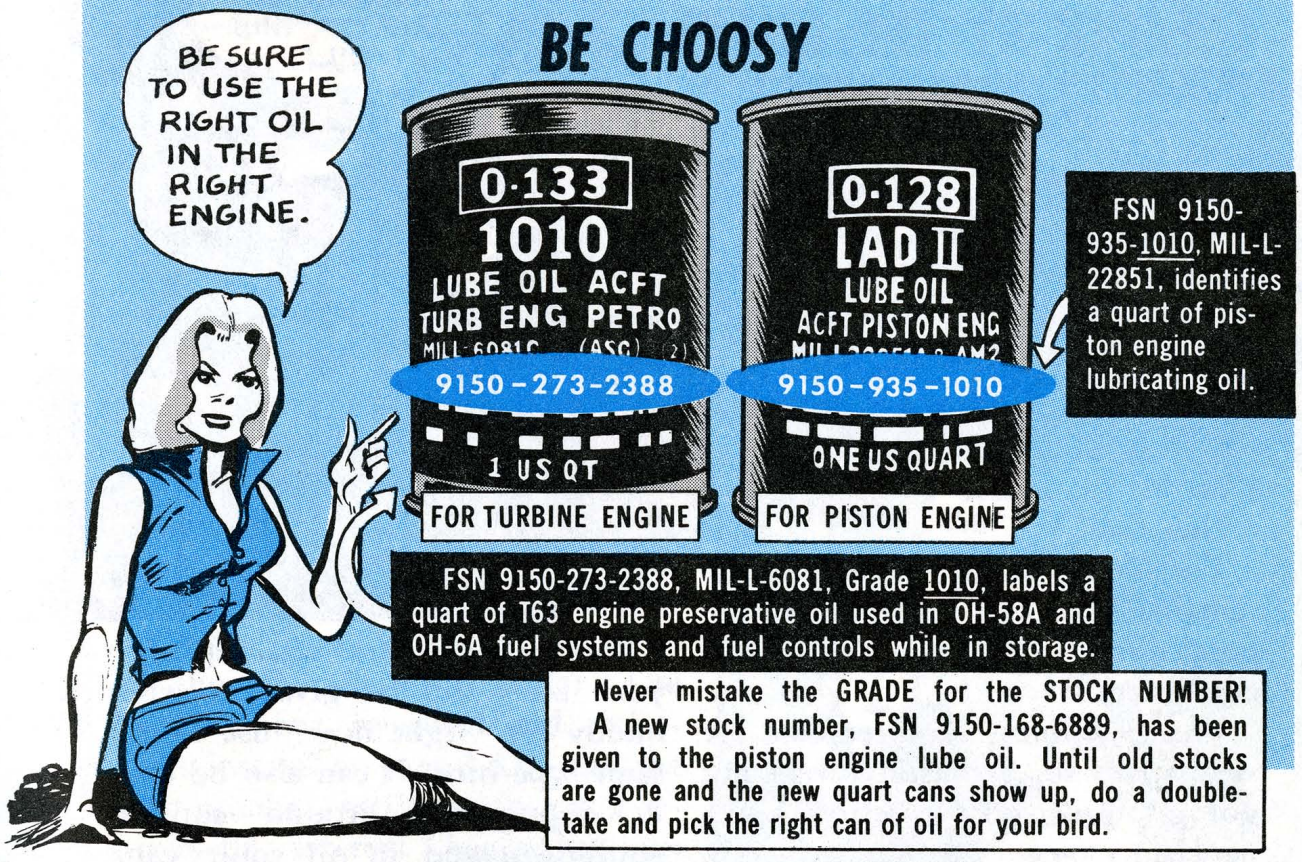
It's in these bends that oily gunk and dust find a home—starts clogging up the tube somethin' fierce-like.

A couple of turns with a wire inside the ejection tube should loosen any dirt buildup.

Run it down from the top for about a foot or so—and then up from the bottom same-same.

A coat hanger works fine.

BE CHOOSY

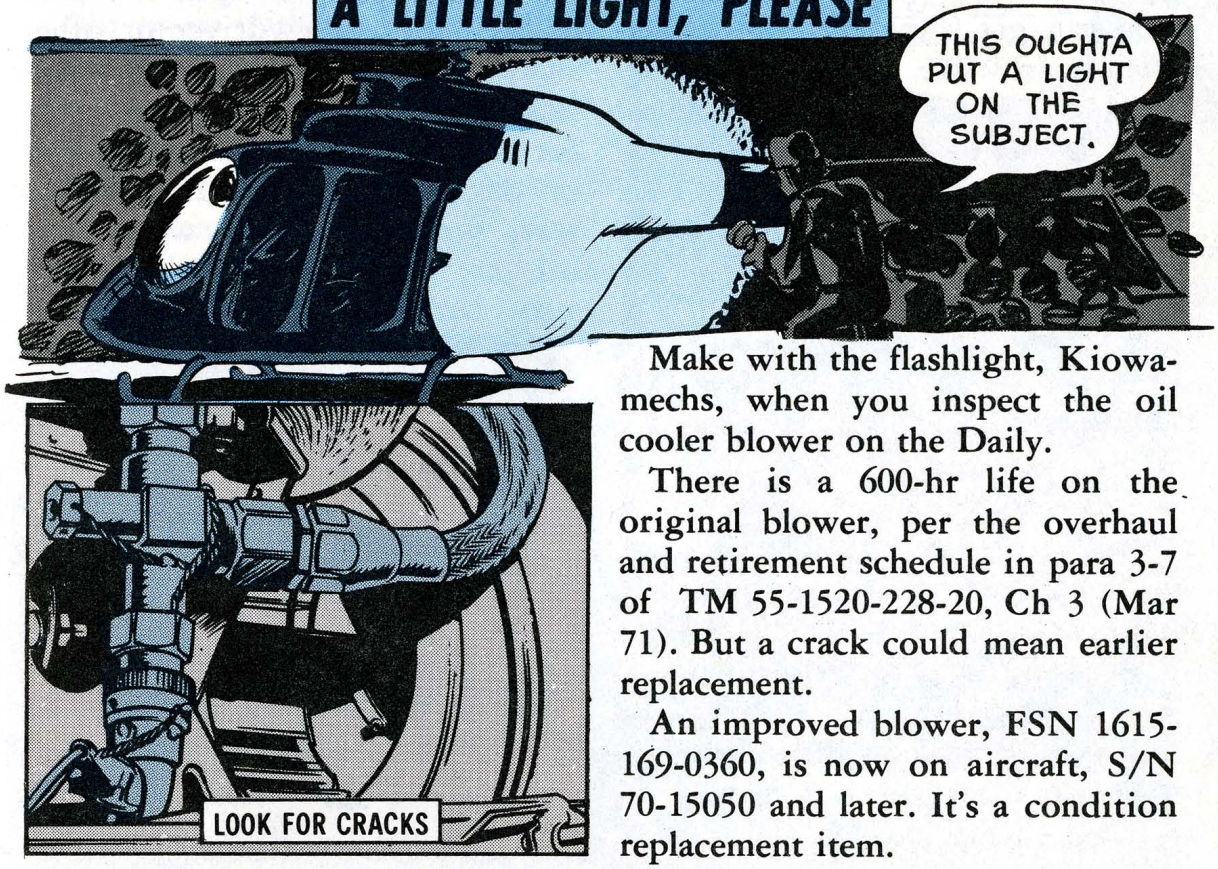


FSN 9150-935-1010, MIL-L-22851, identifies a quart of piston engine lubricating oil.

FSN 9150-273-2388, MIL-L-6081, Grade 1010, labels a quart of T63 engine preservative oil used in OH-58A and OH-6A fuel systems and fuel controls while in storage.

Never mistake the GRADE for the STOCK NUMBER! A new stock number, FSN 9150-168-6889, has been given to the piston engine lube oil. Until old stocks are gone and the new quart cans show up, do a double-take and pick the right can of oil for your bird.

A LITTLE LIGHT, PLEASE



Make with the flashlight, Kiowa-mechs, when you inspect the oil cooler blower on the Daily.

There is a 600-hr life on the original blower, per the overhaul and retirement schedule in para 3-7 of TM 55-1520-228-20, Ch 3 (Mar 71). But a crack could mean earlier replacement.

An improved blower, FSN 1615-169-0360, is now on aircraft, S/N 70-15050 and later. It's a condition replacement item.

CHEAPER BY THE QUART

Dear Windy,

To save some "green" we'd like to keep aircraft oils left over in quart cans for future use.

One method to protect the contents from contamination is to use plastic lids.

Is oil saved this way OK for use in aircraft, Windy?

CW2 R. L. B.

Dear Mr. R. L. B.,

Negative!

The money saved by keeping the remains of a quart is not worth the possibility of ruining expensive equipment.

The cleanliness requirements are very strict so, a plastic lid is not going to give you protection. Use a new can.

If you find yourself with leftovers you can get some oils in smaller-than-quart size. FSN 9150-180-6181 will get you an 8-oz can of MIL-L-5606 . . . FSN 9150-108-5359 an 8-oz can of MIL-L-7808 . . . FSN 9150-180-6266 an 8-oz can of MIL-L-23699.

Any oil left after you replenish your baby can be given to your buddy for "right now" use in his same-type bird. It can also be used in appropriate ground support equipment and in oil squirt cans.

By the way, never open any cans of oil with a screwdriver or other sharp tool which has a plated cutting edge, unless the tool is made for that job. Plating can chip off or the tool may be dirty. Either way, you'll wind up with dirty oil.

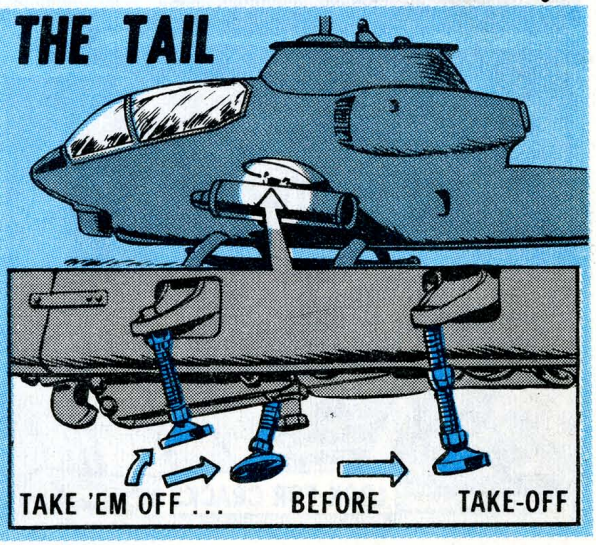
Windy

FOD IN THE TAIL

FOD's whatcha can get in the tail or main rotor blades during an unarmed 'Cobra flight unless . . .

Unless you take off all the sway-brace bolts on the wing stores pylons before take-off.

Stack 'n' store 'em in the supply room. That way the windstream can't rotate 'em out—or pull the pads off—and up or back into the blades.



BE SHARP LOOK SHARP

Keep up with changes to the Chinook (CH-47 B, C) overhaul and retirement schedule in Chap 3, Sect V of TM 55-1520-227-20-1 (Aug 70), Birdmen.

It's important—it's easy!

Compare the schedule with the blade DA Form 2408-16 info. Update the overhaul or replacement life (column j), if needed.

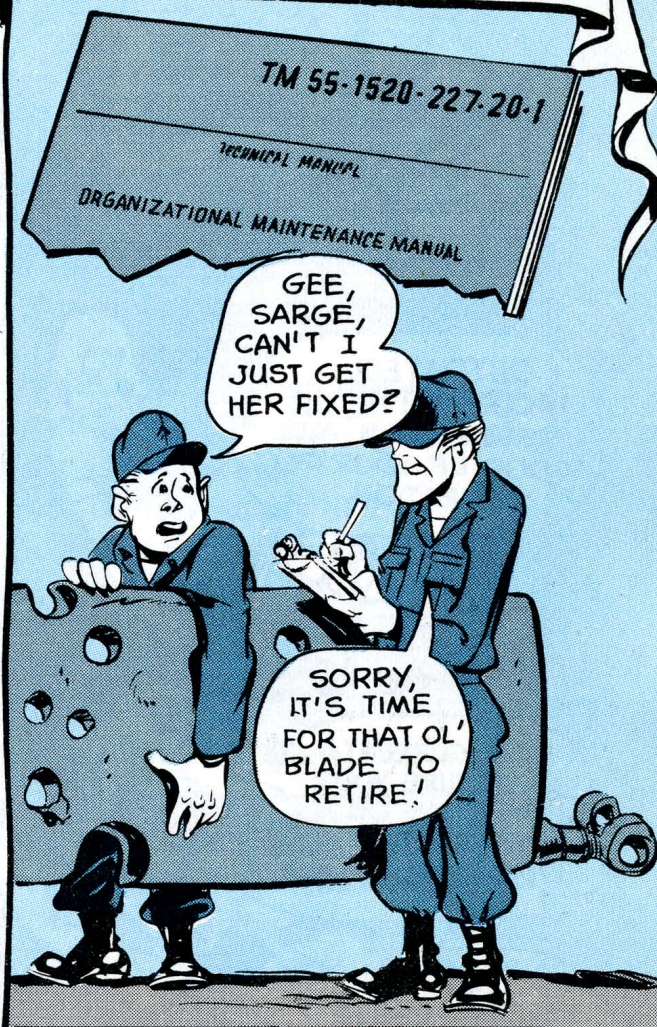
Careful, now! There're 2 sections of the schedule to consider. The part number, overhaul and retirement interval on page 3-82—plus the part number, serial number and retirement interval beginning on page 3-87.

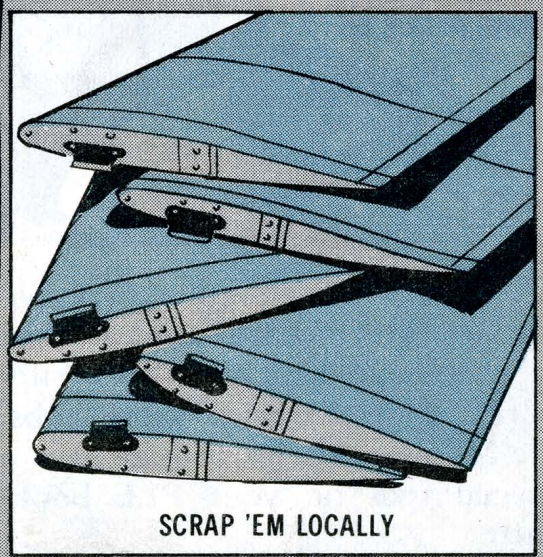
No sweat with the part number, overhaul and retirement set-up. Ship acceptable blades to the depot when the time rolls 'round.

The part number, serial number and retirement time deal is something else again. Fore and aft blades listed are selected components and have no overhaul interval . . . just a retirement time.

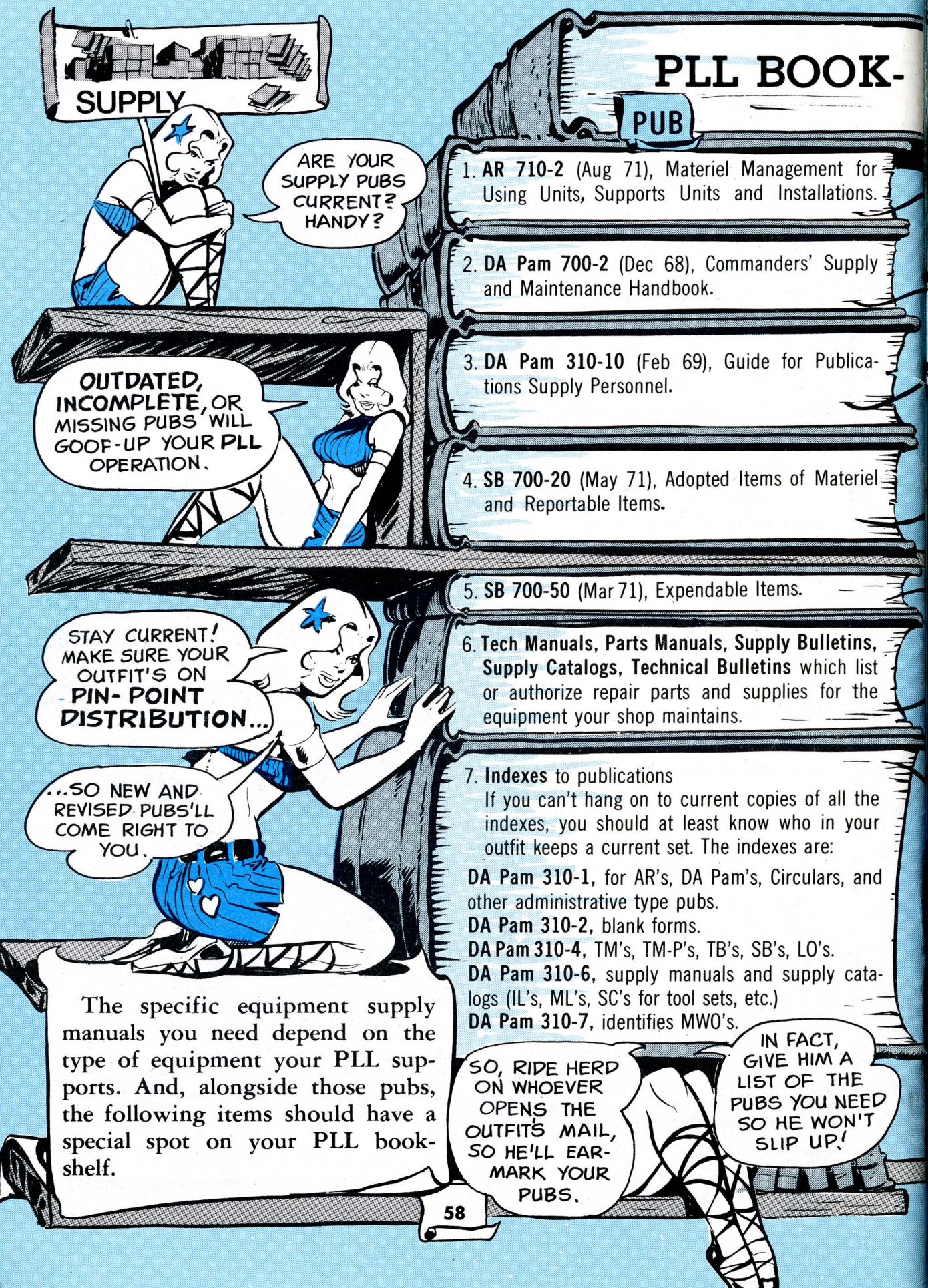
NEVER ship any blades to overhaul when they hit the retirement time, or when they're scheduled for overhaul but are too far gone to be reused.

It's a waste of "green" to ship scrap!





SCRAP 'EM LOCALLY



PLL BOOK-PUB

1. **AR 710-2** (Aug 71), Materiel Management for Using Units, Supports Units and Installations.

2. **DA Pam 700-2** (Dec 68), Commanders' Supply and Maintenance Handbook.

3. **DA Pam 310-10** (Feb 69), Guide for Publications Supply Personnel.

4. **SB 700-20** (May 71), Adopted Items of Materiel and Reportable Items.

5. **SB 700-50** (Mar 71), Expendable Items.

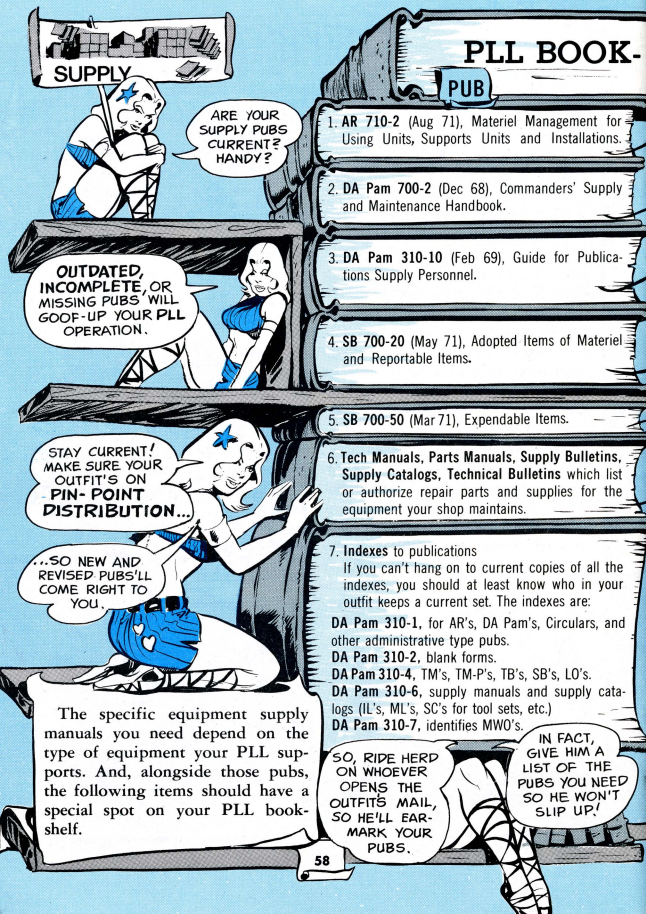
6. **Tech Manuals, Parts Manuals, Supply Bulletins, Supply Catalogs, Technical Bulletins** which list or authorize repair parts and supplies for the equipment your shop maintains.

7. **Indexes** to publications

If you can't hang on to current copies of all the indexes, you should at least know who in your outfit keeps a current set. The indexes are:

DA Pam 310-1, for AR's, DA Pam's, Circulars, and other administrative type pubs.
DA Pam 310-2, blank forms.
DA Pam 310-4, TM's, TM-P's, TB's, SB's, LO's.
DA Pam 310-6, supply manuals and supply catalogs (IL's, ML's, SC's for tool sets, etc.)
DA Pam 310-7, identifies MWO's.

The specific equipment supply manuals you need depend on the type of equipment your PLL supports. And, alongside those pubs, the following items should have a special spot on your PLL bookshelf.



PLL BOOK-SHELF

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PUB	USE
1. **AR 710-2** (Aug 71), Materiel Management for Using Units, Supports Units and Installations.	Sections III and IV, Chap 2, give you PLL SOP.
2. **DA Pam 700-2** (Dec 68), Commanders' Supply and Maintenance Handbook.	Handy reference on filling out supply forms and keeping supply records.
3. **DA Pam 310-10** (Feb 69), Guide for Publications Supply Personnel.	SOP on ordering pubs.
4. **SB 700-20** (May 71), Adopted Items of Materiel and Reportable Items.	It's loaded with supply info on end items (FSN's, LIN's, cost and pubs info). This fatty is revised quarterly. So its date clues you on when to start looking for a new one.
5. **SB 700-50** (Mar 71), Expendable Items.	Authorizes expendable supplies costing up to $25 which are not authorized by other pubs.
6. **Tech Manuals, Parts Manuals, Supply Bulletins, Supply Catalogs, Technical Bulletins** which list or authorize repair parts and supplies for the equipment your shop maintains.	Provide supply and stockage info for working up your PLL.
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If your outfit didn't get some pubs via pin-point, you'll have to order them by using DA Form 17. Order administrative pubs (AR's pamphlets, circulars) from the Baltimore pubs center; order the technical and supply pubs from the St. Louis center.

Your outfit's **equipment density list.**
Shows exactly what equipment your outfit has on hand and is responsible for maintaining.

Your outfit's **supply SOP.**
Spells out specific details on how and when you do certain things in your supply operation, tells who supports your outfit and how, provides **DX**, self-service-store, and **SALTI** supply **SOP**, etc.

NEIGHBORLY AID

Most supply support outfits use the AMDF (Army Master Data File) supply info system. With the master list, support can give you just about any info you need on any good FSN. The AMDF comes in microfilm, and support can come up with the info you need in seconds.

SHELF

USE

Sections III and IV, Chap 2, give you PLL SOP.

Handy reference on filling out supply forms and keeping supply records.

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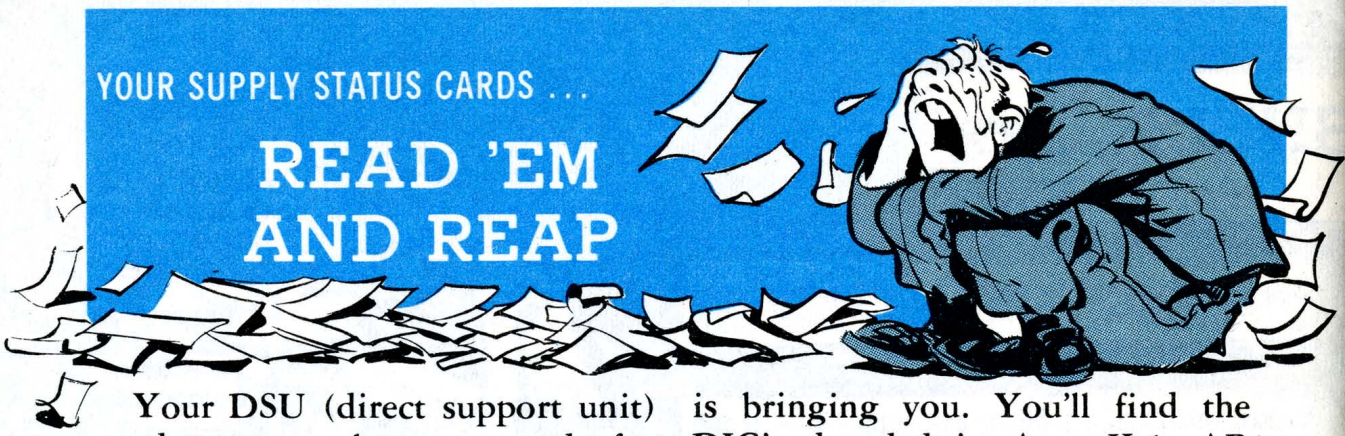
YOUR SUPPLY STATUS CARDS . . .

READ 'EM AND REAP



Your DSU (direct support unit) sends you supply status cards for only one reason—to keep you posted on the things you've requested.

Supply status cards (DA Form 2765 or DD Form 1348m) talk in code. To read the cards right you have to dig the 2-character code use in card columns 65-66.

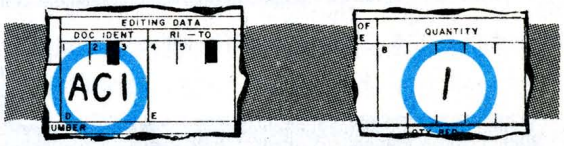
Status cards may simply give you an automatic "Roger" on your request; they may provide specific instruction you're to follow; or they may ask questions which will require an answer or some other action.

The coded messages supply status cards can bring you are decoded for you in App II-17, AR 725-50.

Along with the code in columns 65-66, you also have to know the 3-character code used in the card's columns 1-3, the document identifier code (DIC). It tells you what kind of info the supply status card is bringing you. You'll find the DIC's decoded in App II-1, AR 725-50.

A C 1 Cancellation --

File supply status cards from your DSU in your temporary suspense file, and by your own document number. File supply status cards on requests your DSU converts to MILSTRIP (AR 725-50) requisitions in your regular suspense file, and by the DSU's document number.



When you send in a follow-up or cancel a request, be sure to use the latest supply status card you have on the request.

Status code know-how and orderly files will improve your supply operation no end . . . and will certainly set you apart as a sharp cookie. You can bet on it.

SAVE SWEAT, WORK AND TIME...

SOLVE YOUR SUPPLY PROBLEMS

NOW IT'S AR 710-2

It's for you and your DSU, tool AR 710-2 (Aug 71), Materiel Management for Using Units, Support Units, and Installations, puts it all together. It brings you updated scoop, and consolidates old supply bibles into one handy pub. It supersedes, for example, AR 735-35, AR 711-16, AR 711-25, AR 715-30, AR 135-447, AR 135-460, 145-421, and a slew of other related pubs.

Each level of supply, of course, is covered in a separate section of the new AR. The TOE (property book and PLL) types, for example, use Chap II in AR 710-2. It should be coming your way soon.

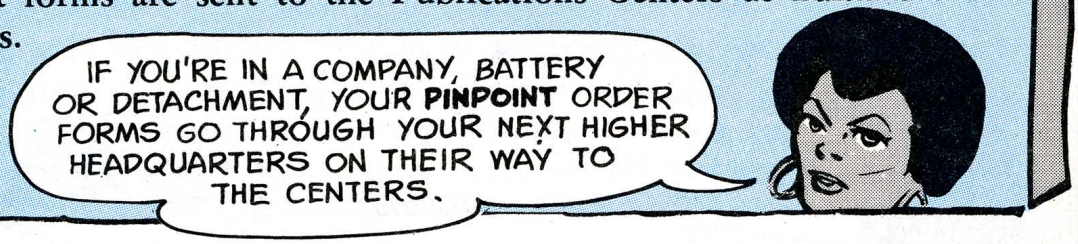
NO-SWEAT MAC-SUPPLY

Mr. PLL-Man . . .

What do you do when the MAC (Maintenance Allocation Chart) in the TM says your shop can replace a part, but the needed item's not listed in the equipment's TM -P? No sweat. Just list both the TM and the TM -P in Block O of your DA Form 2765, like it says in para 2-18e AR 710-2.

GETTING YOUR PUBS?

You may not be getting the publications your unit needs because you haven't asked for 'em. Publications on pinpoint distribution will come to you automatically once your unit gets an account number and your pinpoint forms are sent to the Publications Centers at Baltimore and St. Louis.



COLOR'S IN; BYE THE NUMBERS

Color's in; numbers are phasing out ... in case you're wondering howcum ESC TM's call for color ratings in most cases and numerical scoring in some.

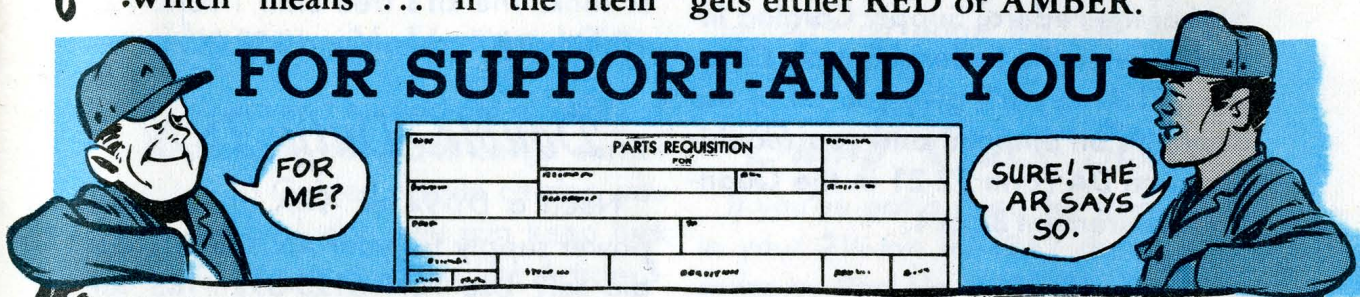
AR 750-57 (Aug 68) zapped equipment serviceability criteria numerical scoring ... but some ESC TM's haven't been changed yet. Until they are changed or rescinded, use the scoring system your ESC TM calls for.

Also, authorized items not on hand no longer get a mandatory RED score. The Mil Spec on ESC directs ESC TM's to make a change which reads:

"Authorized items (subsystems and components of multiple aspect equipment) not on hand shall be given the lowest color rating designated for that item."

Which means ... if the item checks for the subsystem/component are not rated lower than AMBER by the TM for any reason, AMBER is the rating it gets when it's not on hand. In any case, it gets either RED or AMBER.

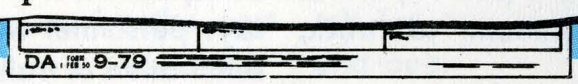
FOR SUPPORT-AND YOU



You too can use DA Form 9-79 for certain supply requests.

Although this multiple-item form is designed for inter-shop support use (para 3-54a(5) of AR 710-2 and para 8-8a of FM 29-22), it's also authorized for certain organizational uses—as spelled out in para 2-68d (2)(b) of AR 710-2.

O'course in some cases it's just 1 of the optional forms and it's normally used only for requesting items for immediate use—NOT for replacing PLL or recurring-demand items, and especially not for those where DA 2765 preprints are on hand.



☆U.S. GOVERNMENT PRINTING OFFICE: 1971 - 759-031/4

Connie's Mini Mini's

Organizational FM 29-2

OMM's the word. And that stands for Organizational Maintenance Management, as spelled out in the new FM 29-2 (26 Aug 71). It has guidelines on all unit maintenance and supply operations, readiness and safety. It lists forms used and other pubs that apply. Appendixes outline SOP's for general and special types of units.

Get Your Introduction

When you can't figure out the abbreviations in the Federal Supply Catalog Management Data List (C-ML-A), get hold of the Federal Supply Catalog Introduction to the Federal Supply Catalog (C-1 Army). It'll give you all of the dope. It's on pinpoint and you requisition it on DA Form 12-21 in the Quantity Requirement Block 1.

Bridge Truck Body Pubs

Sure, there're pubs to keep that M139 military bridging truck body in good shape. The repair parts manual is TM 5-2510-200-25P (Jul 63), and the maintenance pub is TM 5-2510-200-15 (Jun 59) w/ch 1 and 2. They're listed in DA Pam 310-4 (Jun 70) under Body, Stake (component of truck, bridging).

Pneumatic Mattress Stopper

Sure you can get an inflating-tube stopper for your pneumatic mattress, FSN 8465-254-8887. Order FSN 8465-319-4183. It's listed in your Fed Cat C8440/70-IL-A (Dec 70).

Water Tank MWO

If you have a U.S. Rubber Model CE-9C-2, 900-gal collapsible tank water distributor, FSN 3825-542-2173, then you'll need MWO 5-3825-217-20/1 (Jan 71). This kit FSN 3825-103-2156 changes the spraybar braces, and adds an adapter and hose for filling the water tank. The kit's free until 1 June 72, after that it'll cost around $59.00.

Double-Duty FSN

Need a DY-94 or -94A dynamotor-power supply for your AN/GRC-10 radio set? Use FSN 6125-392-7183 for either model, since the two are fully interchangeable despite internal differences.

No Troops in Semis

There's no use messin' up a semi-trailer by installing seats for troop transport. Para 3-1, AR 385-55 (Jul 70) says personnel will *not* be hauled in semitrailers or trailers.

Would You Stake Your Life right now on

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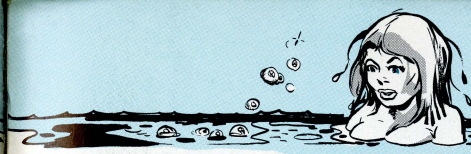
Would You Stake Your Life right now on the Condition of Your Equipment?



Best PM Slogan?

Who's got the best PM slogan or motto?

If you think your outfit has the best one, jot it down and send it to MSG Half-Mast, PS Magazine, Fort Knox, Ky. 40121.

PS will print the best ones.

Commercial Vehicles

If you've got sedans or other commercial-design motor vehicles such as trucks and buses, make sure you're up on the poop in TB 9-2300-295-15/9 (Jul 71)—Warranty Procedures, Commercial Design Motor Vehicles, All Contracts.

M548, XM730 Fix

If you haven't burned out a rectifier/regulator on your M548 cargo carrier or XM 730 Guided Missile carrier, you may just be lucky. You can keep luck on your side by rewiring like Article 3-16 of TB 750-981-2 (Apr 71) tells you.

It's Here!

For mule operators looking for operation, maintenance and parts poop on hydraulic test stand, type D-5B, FSN 4920-882-6401, the search is over. Focus on a copy of TM 55-4920-335-14 (Jun 71) before you service the next aircraft.

13 Digits?

If you run across a 13-digit FSN, like—4330-23-168-1703 don't let it shake you. Or there may be two 0's (or 2 spaces) where the 23 is. That's a preview of things to come—NATO stock numbers. Disregard the 2 digits (or spaces) till further word comes down. Logistics types may want to read about it in Chap 4 of AR 708-1.

M151's Special Wrench

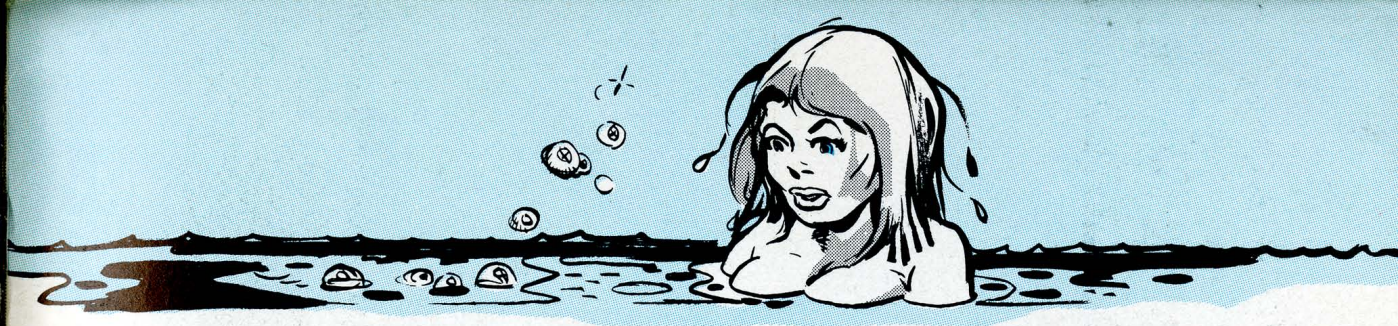
There's s'posed to be a gear case plug wrench aboard every M151-series ¼-ton truck. It's for checking transmission and differential lube levels. You need it — Wrench, drain plug, FSN 5120-220-5167 (listed by PN 11630419 on page B-5, TM 9-2320-218-10, Mar 68).

Dump Truck Seats

If you've got a need for troop seats in your 2½-ton M342A2 dump truck, order by Part No. 5703488. You'll get the seats, bows, cover and all hardware in a kit. This calls for "exception data" requisitioning. RIC is B24.

Dollar-Wise

Be certain aircraft flyaway items listed in the parts pub are onboard during transfer. No ene running up the tab for new covers, tie-downs, ropes and tools.



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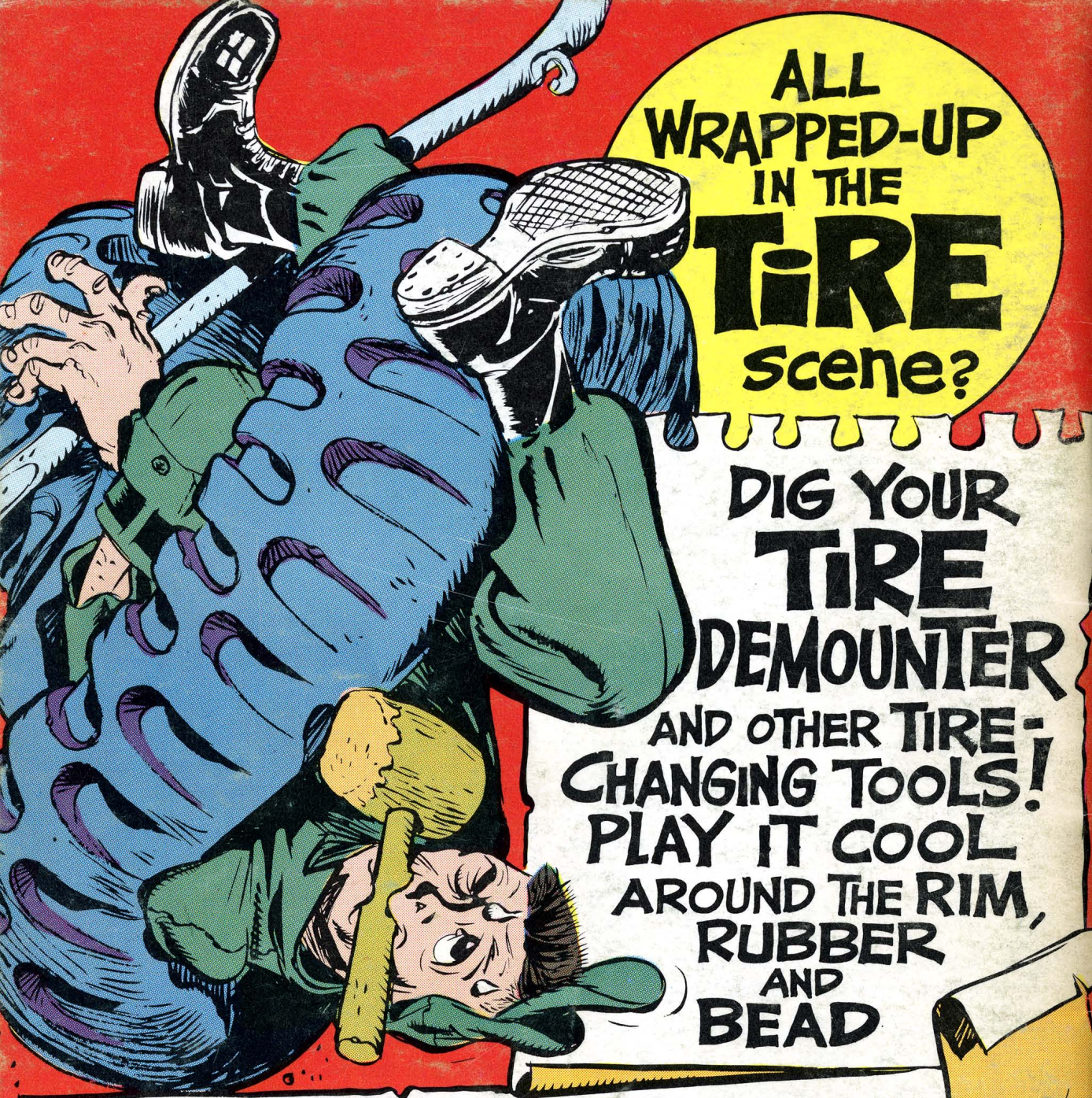

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